

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1485.—VOL. XXXIV.

LONDON, SATURDAY, FEBRUARY 6, 1864.

(WITH SUPPLEMENT) { STAMPED....SIXPENCE.
UNSTAMPED..FIVEPENCE.

M. R. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.

Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES, in no case departing from the position of a broker, at net prices. All orders meet with the utmost punctuality and zeal, and advice given as to the nature and eligibility of INVESTMENTS, when required, EXCHANGES OF STOCK effected on the most advantageous basis, subject only to one commission.

BUSINESS to SELL or BUY in Central Miners, Brynford Hall. FOR SALE:—150 West Trevelyan, 8s.; paid 100 Illogan, 17s. 6d. (very cheap). BUYER of 15 Gornamens; 10 Wheal Hope; 50 New Martha; 10 East Grenville; 50 Bryntol, £2½; 200 Bedol-Aur, 10s. 6d.; 100 Okel Tor; 20 North Downs; 100 Prosper United. * For shares in Grylls Wheal Florence apply to Mr. Crofts.

M. R. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.

JAMES LANE has FOR SALE, at nett prices:—5 Bassett and Grylls, £17½; 20 Bullock and Bassett, 5s.; 50 Crebior; 50 Cornish (fully paid), 20s.; 20 Drake Walls; 50 East Jane, 37s. 6d.; 20 East Carn Brea, £7½; 200 East Providence, £4½; 20 East Lovell; 20 East Russell, £6½; 20 East Seton, 8s.; 50 Marke Valley Wood, 7s. 6d.; 50 Great Wheal Busy, 4½; 20 Kelly Bray, 12s. 6d.; 60 Molland, 9d.; 20 New Wheal Martha, £1½; 50 North Minera (Preference), 10s.; paid 11s.; 50 North Minera old shares, 6s. 6d.; 250 New Wheal Rose, 10s.; 50 New Birth Tor and Vitter, £2½; 50 North Jane, 25s.; 25 North Treskerby, £3½; 30 Silver Mountain, 18s.; 3 South Frances, £56; 10 Trewoon, £3½; 40 Wheal Croft, £2½; 50 Wheal Heartie, 5s. 6d.; 5 Vigra and Clogau, 7s. Old Broad-street, London, E.C.

SHAREHOLDERS IN MINES AND CAPITALISTS will do well to READ PETER WATSON'S "WEEKLY MINING CIRCULAR" of yesterday, Friday, Feb. 5 (No. 369, Vol. 7). Price 6d. each copy (post paid). Forwards on application. In this Circular there are four valuable mines mentioned which are certain to pay good dividends, and the price of shares greatly advance.

STOCK AND SHARE DEALER.—MR. PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.

TELEGRAPHIC MESSAGES TO BUY or SELL Railway, Bank, Mine, and other Shares and Stocks, punctually attended to on commission, or at nett prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

Nineteen years' experience.

(Two in Cornwall and Seventeen in London.)

Bankers: Union Bank of London, and the Alliance Bank of London and Liverpool. Every information can be obtained on personal application or by letter, as to purchases and sales of mine and other shares, and the best investment for capital.

From the close proximity of his Office to the Stock Exchange, as well as the Mining Exchange, Peter Watson is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.—February 5, 1864.

M. R. W. LELEAN, 11, ROYAL EXCHANGE, LONDON, E.C., has FOR SALE:—10 Burr Burr, £15; 25 Wheal Crebior, 20 East Lovell; 1 Providence, £4½; 5 Nanglais, £25; 5 West Chiverton, £5½; 50 East Rosewarne, £1½; 25 Hington Down, £5½; 10 Great Laxey, £5½.

Mr. Lelean recommends for immediate investment, paying good dividends, East Lovell, Providence, Burr Burr, and West Chiverton, all of which will bear the strictest investigation.

Shares bought and sold on the usual commission. Telegraphic messages promptly attended to. Mines inspected, and reliable information given. Established 15 years. Bankers: Robarts, Lubbock, and Co.

M. R. G. D. SANDY, SHARE DEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C.

FOR SALE:—5 Bedol-Aur, 5s.; 50 East Rosewarne, £27½; 10 Great So. Tolius, £4½; 20 North Bassett, £2 13s. 9d. 6 Bryn Gwio, 5s.; 10 Great So. Tolius, £4½; 20 St. Day United, 38s. 9d. 25 Camborne Vean, 50s. 9d. 20 Hington Down, 2s. 9d. 10 Wheal Hope, 10s. 6d. 15 Marke Valley, 1s. 6d. 3 Clifford Amalgamated, 5s. New Rosewarne, 15 Kitty (St. Ag.), £7 18 9 2 East Bassett, 150 New Minera, 10s. 6d. 20 East Carn Brea, £7 7 6 25 New Trewoon, 10s. 6d. 20 Great Wheal Busy, 10s. 6d. 20 East Grenville, £3½ 10 Great Trewoon, 10s. 6d. 20 Great Wheal Busy, 10s. 6d. 20 East Lovell, 10s. 6d. 10 Great Laxey, £5.

EAST LOVELL.—Mr. Sandy should be consulted immediately respecting this property, he being enabled to give the most reliable information.

SHARES FOR SALE in two or three mines certain to have a great rise during the present year. A correct daily price list will be forwarded on application.

Business transacted at the closest market prices.

M. R. H. WADDINGTON, MINING AND SHAREBROKER, 26, THROGMORTON STREET, LONDON, E.C. Shares in railways, mines, &c., bought and sold on the usual commission.

M. R. E. GOMPERZ, MINING OFFICES, 3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C. BUSINESS TRANSACTED IN BRITISH AND FOREIGN STOCKS AND SHARES. Terms, 1½ per cent. Bankers: London and Westminster Bank.

JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C., SHARES IN MINES BOUGHT AND SOLD on commission, at 1½ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

M. R. WILLIAM MARLBOROUGH, 48, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the FOLLOWING SHARES at nett prices, for cash:—

20 Bryntol, £1 1s. 6d. 15 East Russell, £5 3s. 9d. 10 Great So. Tolius, £5 3s. 9d. 20 Carn Brea, £2 13s. 9d. 20 East Grenville, £2 8 9 10 Wheal Hope, £5 2s. 6d. 1 West Tolius, £61. 25 Wheal Crebior, 50s. 9d. 1 Wheal Buller, £4 14s. 25 Wheal Crebior is rapidly improving, and should be purchased at once. I recommend their being bought up to £3 each. Reliable information as to the future prospects and results furnished on application. Intending purchasers should peruse Capt. John Nancarrow's report, made some months ago.

J. AMES HUME, SHAREBROKER, 74, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C.

J. Hume's "Circular" for Jan. 13, now ready, price 6d.; subscription, 5s. per annum. Commission on buying or selling shares, 1½ per cent. In all commission transactions, Mr. Hume returns to clients the price dealt at. Bankers: London Joint-Stock Bank.

M. R. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has FOR SALE:—

Bedford United, £2¾. East Carn Brea, 27s. East Russell, £5 1s. East Conduffor, £10s. Clifford, £29½. Chiverton, £11 1s. 9d. Chiverton Moor, £5½. East Chiverton, £3½. East Bassett, £6½. East Lovell, £3½. East Caradon, £27½. And is a BUYER of—

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Original Correspondence.

THE NEW GEOLOGICAL SPECULATIONS.

Sir.—Your correspondent, "Carbonaceous," evidently does not know what Mr. Dickinson's paper on geology contains. He has, apparently, read only the account of it which appeared in the *Mining Journal* of Jan. 23, and which gives little more than a summary of the conclusions arrived at. The paper itself is full of "evidences in nature," and such as only a close observer, possessing frequent opportunities, could make.

From the familiarity with which "Carbonaceous" handles the names of certain gentlemen connected with the Jermyn-street Museum, it might be supposed that he belongs to that fraternity, except that those gentlemen would not be likely to write so little knowledge of a subject, nor descend to attack the professional reputation of anyone because he happened to differ from them on a geological point.—Feb. 2. FAIR PLAY.

VENTILATION OF COAL MINES.

Sir.—In the Journal of Jan. 16 I find that "M. E." makes favourable mention of my method of removing explosive gas from coal mines. In his letter he says—"Various plans have been proposed for the safety of miners, perhaps the most sensible one being that of Mr. Williams, of Blaenavon, who proposes to drain goaves, &c., by means of iron pipes." With all due deference, I beg to say that there is no difficulty in removing explosive gas in any quantity and from any part of a goaf in a coal mine. I have done it in a coal pit in Aberdare, and can do it again. The fact is fully verified in the enclosed report, which was addressed to me by Mr. Lewis:—

"Blaifa Colliery, Aberdare, Dec. 11, 1862.—I have much pleasure in stating that the apparatus erected by you at my colliery for the purpose of practically experimenting and testing your invention for extracting gas from coal mines may now be seen in successful operation; and where any gentleman interested in this important matter is at full liberty to examine its operation, both above and below ground, and thereby satisfy himself as to the beneficial results to be derived by the application of Mr. Williams's very simple and effective invention.—E. LEWIS."

I do not require any fire pressure or machinery; one of Nature's laws put into operation will succeed. I am ready at any time to reveal the secret, and to give it gratuitously to the coal proprietors, for the sake of humanity.

I will make a few remarks on the letter of "M. E." of the above date.

He says "that pipes are superfluous, as the passage and galleries can be used to advantage. I deny it; all air currents take the shortest route to the exit, and will not traverse the whole of the mine without doors, brattices, &c. Goaves cannot be entirely cleared of gas, for there are many cavities where a direct current of air cannot play on them. A current of air cannot pass through a body of gas leaving a wall of gas on each side, and on the top of the air current in the cavities of the roof. Gas floats on the surface of air as level as a sheet of water, and will not descend without pressure to an aperture below its place of exit. The action of gas and water are identical. Water sinks below the surface of the air, its surface always level. Gas in a quiescent state will float on the stratum of air, the under surface quite level. If you had a deep working water would fill the lower parts and render it unfit for work. The proprietor would spare no expense to drain it. Gas, although equally inconvenient, no one thinks of any effectual plan to remove it, on account of its invisibility. By my simple method I can either remove it to the surface or consume it in the bottom of the pit, or let it go waste. I am prepared to prove to anybody of scientific gentlemen by actual experiment its adaptability.

I should feel obliged if "M. E." or some other well-informed correspondent, would inform me by what method Mr. Budde caused the gas to flow through the workings up the shaft? Did he dam the gas in the goaf, so that the confined evolution of the gas forced the atmospheric air through the pipes to the surface? If so, his plan is different to mine. I do not require any damming. I insert my pipe in any place where an accumulation of gas may be found, and in ten minutes it will flow to the surface, and continue to do so as long as gas is evolved in that part. I am of opinion that a large area of work may be drained into one or more large goaves, and pipes inserted into each, so as to effectually remove all danger from working with naked lights, with the exception of sudden blowers. I court the strictest investigation; and, most extraordinary as it may appear, I have asked many persons really interested in mining affairs, to investigate my plan, and find they have the greatest horror of pipes and expense, and will not trouble themselves in the matter. All who have seen my apparatus at work are fully convinced that there is no difficulty in removing gas.—Blaenavon, Feb. 2. JOHN G. WILLIAMS.

COLLIERY WORKINGS.

Sir.—In reply to the letter of "X. Y." in the Journal of Jan. 23, on the subject of sinking shafts, the last paragraph of that letter states that there is a diversity of opinion as to whether it is more advantageous to sink two new vertical shafts to the dip, or to drive an incline down in the Silksone coal from the bottom of the present pits. These pits are sunk to this coal 160 yards deep, and the contemplated extension by an incline from the bottom of the present pits is intended to win 300 yards of coal to the dip. Two new vertical shafts to reach the same depth of coal would require to be 328 yards deep, supposing the surface to be level, and the dip 2 feet per yard. The latter plan has advantages, as to raising coal in one lift by one engine, and also for raising water, but the probable cost of each method must be well considered. The nature of the strata to be sunk through in the pits, and the quantity of water, are two important questions for consideration, and the cost of repairs with each system.

If I understand the situation aright, the present vertical shafts could not well be sunk deeper, on account of a heavy stratum of water, either lodging naturally in, or near, a seam of coal, or in old workings drowned up. If the former, the difficulty may be overcome by stopping the feeder in the pits with east-iron tubing, which may cost 20/- per yard, and upwards, according to the weight of the metal and the size of the pits. This, of course, requires engine-power and pumps sufficient to overcome the feeder while the tubing is being put in, and the flow of water is not supposed to be of extraordinary quantity. Should the difficulty be overcome by this means, then the present shafts could be sunk (say) 174 yards deeper, and a pair of stone drifts driven in the direction of the dip of coal; these drifts would be 250 yards long to the Silksone coal, rising 1 in 280, winning coal to the same depth as the two first-named plans. It will be observed, these drifts will encounter the same feeder of water supposed to occur in the shafts, which could also be stopped back by east-iron tubing. Should this be accomplished the drifts might intersect other seams, the produce from which could be brought to the vertical shafts before the Silksone coal was reached, if necessary; the value of the various seams being taken into account before deciding on any particular plan of operation. Another advantage in connection with the latter plan would be, that the machinery now erected would be available for drawing the coal and water. At present, as I understand, the two shafts are sunk 160 yards deep, and an incline is driven 60 yards in the coal to the dip, this and the horizontal landing connecting it with the shafts will be worked by a separate engine, but the range of coal being limited, the quantity raised falls short of what was intended to be got from the seam; this could, perhaps, be remedied by the extension downwards of the incline (say) 60 yards further, thus giving a larger field for mining operations.

B. M.
Durham, Feb. 2.

ACTIONS AGAINST COAL OWNERS.

Sir.—I think it is almost impossible to estimate the injury resulting both to masters and workmen from the disreputable practices of the Miners' Union, and that it is positively necessary that there should be some legislative enactments for regulating disputes between masters and workmen, and more especially for preventing the agitators of the Macdonald and Stephenson class from exciting the men to all kinds of acts of stupidity, such as strikes and half working, in order that the delegates, or, as they are falsely called, protectors of the colliers, may live in idleness, and receive more pay than a good colliery viewer, who has had long years of practical experience. If what is wanted is contentment among the workmen and the safety of the pits, let a law be made that no man shall be appointed to any position in a colliery above a coal hewer who cannot pass an examination, nor who have not worked at least seven years in a pit. By this means we should get intelligent practical men for colliery officers, there would be a prospect for the persevering collier to get a good position, and everything would go on better.

The present action against the Edmund's Main owners can produce no good to the workmen, though the delegates may make a good thing of it. Had there been any chance of convicting the owners of neglect, all that need have been done was to send a letter to the Secretary of State requesting him to order the Inspector for the district to prosecute. As it is, the delegates have commenced 33 actions against the very firm which the Secre-

tary of State does not consider likely to be convicted. It is said, too, that prosecutions cost nothing when carried on by the Government, though the whole expenses of the 33 actions, as well as the delegates' expenses, which will amount to many thousands of pounds, will come out of the funds of the Miners' Union, and go into the pockets of the lawyers employed by the delegates.

A NORTHUMBERLAND HEWER.

MANUFACTURE OF IRON AND STEEL.

Sir.—The formation of several companies having for their object the manufacture of Bessemer iron and steel causes it to be a subject of some importance to know what has been done by the company first formed, and upon the direction of which Mr. Bessemer himself occupied a place. Surely sufficient time has elapsed for some information to be given as to the realised profits; and if the result of Mr. Bessemer's company were made known it would, no doubt, materially assist the more recently formed companies—Mr. Mushet's and North Staffordshire—to obtain their capital. I presume Mr. J. G. Martien has long since sunk into oblivion; and, as it was rumoured at the time of the formation of Mr. Bessemer's company that Mr. Mushet had signed a deed to the effect that he believed Mr. Bessemer to be the first and true inventor of the pneumatic process, legal difficulties would appear to be impossible. Assuming the rumoured deed between these two gentlemen to be in existence, I should suppose Mr. Mushet bargained for the right to make use of the pneumatic process without payment of royalty to Mr. Bessemer. If this be so there is nothing to prevent Mr. Mushet's company being a decided success. Mr. Mushet's inventions of improvements are very numerous, and the inventor being an experienced practical man their utility cannot be doubted. I scarcely think that the prospector is explicit enough with respect to the purchase-money, for upon reading it with ordinary attention one would consider, as you have made it appear in your City Article, that the purchase-money is £20,000, though I am inclined to think that the fact is that it is only £100,000, for the prospectus states that of the 2000 shares of £100 each only 400 will be created, whence it must be concluded that the remaining 1600 shares, of £100 each, remain the property of the company. This leaves only £100,000, as the purchase-money, and I do not hesitate to say that the payment of that amount for Mr. Mushet's patents is just and reasonable, and will afford the company ample opportunity for realising enormous profits.

M. R.

THE COPPER TRADE, AND ITS PROSPECTS.

Sir.—There is, it would appear, a general alarm in the Metal Market that the sources of our supply of copper are becoming exhausted, at a time when the demand for that metal is vastly increasing. Under such circumstances it can but be interesting to enquire how far we are justified in drawing such a conclusion, and how far the present production of copper, as compared with that of previous years, warrants us in assuming that the copper deposits of the world are worked out. To appreciate the present, as compared with the past, let us glance at the early history of copper mining in England; and, for the information of those unacquainted with the matter, it may be well to preface my remarks by saying that all metallic produce obtained from English soil was, previous to the middle of the 17th century, the property of the Crown. Before that time it was the privilege of royalty alone to grant charters of metallic produce within certain districts to the favourites of the Sovereign. The first of such grants, in which copper is mentioned, is that given to Walter Galbota, by Edward III., in 1359, of all gold, silver, and copper mines in Cornwall and Devon. Antecedent, however, to the date of this grant the Romans must have known of and worked copper mines in England, since there are remains of furnaces built by them in several parts of England for producing brass. Unfortunately, no record remains of the amount of, or localities from whence the Romans obtained their supplies, nor do we even possess any account of the yield of the mines of Cornwall and Devon under the Royal grant given to Walter Galbota. Passing over, then, these the first vestiges of copper mining in England, and the records of which are little other than matters of tradition, I must mention the mines of Rammelsberg, in Lower Saxony, of the Fahlun, in Sweden, and of the copper slates of Thuringia, as being all productive of copper, and the chief sources of that metal during the 14th, 15th, and 16th centuries.

To return to our English mines, Carew tells us that at the close of the 16th century copper ores were shipped from Cornwall to Swansea to be smelted. From this date we possess more satisfactory accounts, and Pryce states that at the beginning of the 18th century copper mines were worked to some extent in Cornwall, and from the same author we learn that the yield of copper in Great Britain in 1770 had increased to 27,000 tons of ore annually. This vast augmentation in the yield of our English mines may be attributed to the impetus given to mining pursuits by the abandonment on the part of the king to all claims on the ores of the ignoble metals after our revolution in the 17th century. The restraint on such undertakings being by this limitation of the royal prerogative removed, capital was invested in mineral speculations, and copper mines were opened and worked in England, which, by the abundance of their produce, effected such a revolution in the copper trade as has enabled the market of England from that time to fix the value of this metal in every part of Europe. When we consider the imperfect appliances at the command of the earlier pioneers of the science of mining for developing mineral produce, and that from their want of hydraulic machinery they must have been compelled to confine their explorations to the surface deposits, the yield of our British mines at the close of the 17th century seems almost incredible. In truth, if it had not been for the large amount of copper found near the surface in the Island of Anglesea and in Staffordshire, it would have been impossible to have supplied the increasing demand for that metal in Europe. It is not my intention to follow the gradual improvements in mining machinery from the early days of mining, and with those improvements the increasing depth of mining operations, although such considerations are matters of great interest; it is rather my intention to follow the discovery of those new districts yielding copper, from whence the supplies of that metal have been derived to meet the requirements of the civilised world, and in this it is my wish to pay more particular regard to our home productions. I cannot, however, refrain from stating that the invention of steam, and its application to pumping the water from our mines, originated a new epoch in mineral undertakings, and, moreover, that the first steam pumping-engine was erected on Wheal Vor.

Having given this short historical view of copper mining, I will proceed to examine the localities from which were derived the supplies of copper at the early part of this century. From Southern Europe, then as now, but small quantities of copper were produced, and I may safely say that the total production of the copper mines in France, Spain, Italy, and Poland did not then exceed 500 tons per annum. On the other hand, from Northern Europe, and especially Germany, large quantities of copper were exported. The chief centres of action there were the mines of the Rammelsberg, in Bohemia; the copper slate mines of Mansfeld, in Thuringia; and the copperiferous veins of the Harz Mountains. Austria also was then prominent as a copper-producing country, and the veins of the same metal in the copperiferous slates of Hungary seemed almost inexhaustible. The capricious copper deposits near Fahlun, in Sweden, proved at the close of the 18th century most productive, are here deserving of particular attention, from their great geological peculiarities. In this short review we have attempted to mention the more important copper-producing districts of Europe at the close of the last and beginning of the present century. Let us now examine the yield of our British mines since the year 1815, and we shall here find a gradual advance in productiveness up to the present day. In this same year (1815) the Cornish mines returned 6607 tons of metallic copper. In addition to this amount, other mines in Great Britain, of which those of the Parys Mountain, in the Island of Anglesea; the Ecton Hill Mine, in Staffordshire; and others in North Wales and Ireland, returned more than 1200 tons in the same year. About the same time considerable importations were made to Europe from the Levant, of copper from the mines of Armenia and the Euphrates, and the copper of the Urals Mountains became first known in Europe. Not only from the East alone were our supplies of copper derived at the close of the 18th century, but also from the West, and South America sent to our market at that time 1500 tons per annum. Almost from their first discovery the mines of Chili have been notorious for their richness, and have long rivalled all those of the known world.

To return to our Cornish mines, we find that in 1825 they yielded 8417 tons of copper, being nearly 2000 tons in excess of their yield in 1815; and that in 1835 the yield had increased to 12,271 tons of copper per annum. In 1845 the returns show a diminished produce in the amount of 12,241 tons, as compared with the yield 10 years before. This figure again increased in 1855 to 12,578 tons; and last year—in 1863, the total production of our mines of Cornwall and Devon was 11,121 tons of fine copper. It cannot be denied that many of our best and richest copper districts in Cornwall have fallen off in their yield of metal; but from the returns we

have given, it will be seen that if we have not our once Great Gwennap Consolidated, and St. Austell Great Crinnis Mines, we have other fields of operation, which have, as yet, prevented any great diminution in the total amount of our copper supplies from Great Britain. And although the demand for this metal has enormously increased with the spread of civilisation over the earth, and our British mines are not as rich as formerly, we may, with some assurance, depend on our foreign sources, and view with complacency the metallic wealth of our colonial possessions. Moreover, when we are told that our copper imports from Chili and South America generally are decreasing, it cannot for a moment be supposed that this decrease is more than a temporary lull in the supplies from that quarter. There are some alarmists who would have us believe that the copper deposits of South America are exhausted, but those who have travelled there, and ridden over the almost boundless tracts yielding copper in that continent, cannot doubt but that as our knowledge of these hitherto desolate wilds shall increase new deposits will be discovered, which shall rival the far-famed wealth of Chanarcillo and Tres Puntas. Again, we would ask, do we appear yet to have come to the end of the native copper of Lake Superior? And do not the present finds in Canada warrant us in depending somewhat on that colony for our home supplies? These questions are of great interest, and a fair solution of them can but tend to reassure us, and to lead us to expect for the future an increasing rather than a decreasing supply of copper. We should in this imperfect summary commit a great error if we did not here give the copper mines of South Australia their due prominence. We have lately seen how immensely the exports of this metal from that continent have increased, and how, despite the absurd prejudice that has for so long disturbed mining speculations in that country amongst our English capitalists, new mining districts have been developed, the richness of which seem almost fabulous. P. M. H.

POSITION OF LODGES.

Sir.—In reply to "R. W." I may state that I have long been impressed with the idea that both lodges and cross-courses have in many instances been subjected to more than one disturbance, under probably different circumstances and conditions, otherwise certain facts in connection with those veins seem almost inexplicable. A short time since I saw a cross-course laid open some 60 fms. in length, in which several small perpendicular and nearly parallel veins were intersected, one of which had been apparently displaced 8 to 9 feet, another not quite half that distance, and a third not over 1½ feet. Now, had all those veins been formed at one time, we might suppose the "heave" or displacement would have been alike in each case; but as this is not so, I consider it probable they were formed at different times, and also that the cross-courses had been subject to different movements in the same direction. The problem proposed has,

I think, some similarity to this, I, therefore, suggest the following solution of it:—Let A, B, C (in the margin) represent three different states, or conditions of the same section, at different times, A immediately afterwards the first displacement of No. 1 lode, and prior to the formation of No. 2 lode; B, after No. 2 had been formed, and prior to any further disturbance in the cross-course. Lastly C, subsequently to another shifting of the strata in the same direction, which finally leaves it as now found. I regret not having the original diagram at hand, that I might have used the same terms for the same portion of the section, but I trust I am sufficiently explicit to convey the idea intended. S. B.

APPLICATION OF MACHINERY TO MINING—MOUNT CENIS TUNNELLING MACHINE, INTERIOR OF THE EARTH, &c.

Sir.—I observe you published my remarks on "Mount Cenis Tunnel." I there promised some further observations on the remarks by Mr. Fox on this great undertaking. I am aware that Mr. Fox, like myself, is an advocate for adopting machinery to aid manual labour; but everyone should know that it is not economy to use complicated machinery in the execution of work, when such work can be accomplished by men in less time, and at less expense. It is no use jumping at the conclusion that machinery is to do all the work, and that men are to look on. Man was placed on the earth to labour, and ever will have to do so. I am an advocate for the application of machinery to every useful purpose, when such can be done with economy; but there are so many bubble schemes offered to the public by men of crotchetts, that it behoves us to be cautious in adopting them. Anyone glancing over the patent list cannot fail to observe how many such schemes must prove failures to one that is really useful. I look with a suspicious eye on all these things. I know the genuine ones to be like Wellington and Bonaparte, few and far between. I might enumerate a thousand attempts to bring machinery to bear on mining, but few of them have succeeded. Giving Mr. Fox credit for all his endeavours, which I know have cost him money and valuable time; still he must not be too sanguine when he calls on practical men to accept his views. They are slow to adopt new ideas, but ever eager to take advantage of what they are convinced will be useful. I do not for a moment attempt to disprove the ultimate success of boring-machines, but very great changes are necessary before that can be. I have advocated the use of them in Cornwall for the last twenty years, but would like to see a shaft bored by one, before I would give it countenance as a success. I carefully read Mr. Fox's opening speech at the Miners' Association, Falmouth. There he ought to have confined himself to Cornwall mining. I criticised his remarks at the time rather severely. I am, however, compelled to make a few observations here, being at a loss to know why he was so far carried away as to introduce Blandford or even Brigham Cave on that occasion, as it has no reference to practical mining. He slightly touched on mining, for which the practical miners will, I am sure, everfeel indebted. He told them to tamp holes with split sticks instead of kiln stone, which may be a good substitute, but he failed to show its advantages. He also told them to fire holes by the galvanic battery, but did not instruct them in the use of it, or where it was to be placed. I do no know what kind of attorney Mr. Fox purposes using, or where he would fix it, to command a mine that has levels and pitches a mile or two apart; would he intend one battery to serve an entire mine, or for every two or four men to have a separate machine? I fear galvanic batteries are too complicated for the use of every miner—were they as simple, cheap, and applicable as lucifer-matches, there might be some chance of their being brought into use; but for general purposes I do not see their utility; although I do not condemn them until I know how he proposes their use. I will make no further comment on his discourse at that meeting just now, but I will next turn to Mr. Fox's remarks on Mount Cenis tunnel. I have his letter before me, and from a thorough examination of the tunnel, I can arrive at no other conclusion than that Mr. Fox, like all other theorists, disliking the sight of lamps underground, did not enter the tunnel, but contented himself with the roughy examining the machine at work boring rock in the tool shop, a mile and a half distant from the tunnel, where they were boring 2½-inch holes in open daylight. He also had access to the books for his statistical account of what was doing. Had he entered the tunnel he would soon have discovered if the machinery was at work; but I do not require extra nerve to withstand the shock! The Hartley engine-beam, so carelessly let fall into the pit, did not make such a frightful noise as the men and the machine when I was in. I am quite sure Mr. Fox would not venture to pass it when it was at work, and if it were stopped he could form no opinion of its capability; neither is he accustomed to be in such dense smoke and foul air, with oil lamps to guide him, in ascertaining the size of the hole. Had he examined the tools at the tunnel's mouth, he would have found only 1½-in. borers. If he had thoroughly examined the machine at work, the smoke and foul air within, and that none arrived at the mouth, he would have discovered that men working in such an unnatural element could not possibly live half their days; he should have openly told them, as I have done, that other means must be adopted to drive the remaining three miles, and not jeopardise the lives of men, whose features are already telling the tale. Had Mr. Fox examined the stores, he would have found cartridges containing more like half a pound of powder than six pounds.

I have but one other point to notice—the stress he lays on the great depth being a proof of the earth's interior fire, so enlarged on by him and other theorists. It is like his theory of the increase of temperature in the deep mines of Cornwall, which cannot be received until we are informed of the gases these great metalliferous lodes emit, and the consequence of their union with the oxygen entering the mine. Would such combination generate heat or cold? Similar remarks apply to this tunnel. It is going through lodes of anthracite coal in which are nodules of sulphur. What are the gases emitted from these lodes? They are contaminated with sulphur and iron. I contend that neither this tunnel nor the Cornish mines yield a shadow of proof of the earth's interior fire or heat. When Mr. Fox visits the tunnel again I shall be happy to accompany him, and before we separate his erroneous views of the interior of the earth to be alike, a substance that will not melt when in combination with oxygen; then is it reasonable to suppose it will melt without it. I hope Mr. Fox will openly meet my remarks, and endeavour to set the mining community right, in accordance with his theoretical views, on this momentous question? If this mountain were thrown up by volcanic action, the miner will have to pass through the hole, or cone, through which the upper portion had passed. If such is the case, theorists will have some

therein stated that the Rossa Grande profits had already realised a dividend of 7½ per cent. for the nine months' working, equal to 10 per cent. per annum, whereas it is the Don Pedro Company which has just earned that dividend. Allow me, however, most emphatically to contradict the statement which was made in the before-mentioned letter—viz., that negotiations were commenced in this country for the purchase of the Rossa Grande property by a director of the Don Pedro Company. The directors have never made any offer whatever for the Rossa Grande property, nor have they instructed anyone to make an offer on their behalf; but, as I stated in my previous letter, the offer was made to the directors, who for satisfactory reasons declined it. It may, perhaps, be interesting to persons who intend to become shareholders in the Rossa Grande Company to know that the "cash" payment mentioned to the Don Pedro Company was £8000.

Liverpool-street, Jan. 30.

J. E. DAWSON, Sec.

YUDANAMUTANA COPPER MINING COMPANY.

SIR.—A short time since I received a circular, dated Jan. 10, signed "Veritas," addressed to the shareholders of the Yudanamutana Copper Mining Company. A few years since, such a circular would have shook every share out of me; now I am so used to the "bears," I take no notice of such circulars, except I may be able to assist some of my brother shareholders in retaining their shares, and thereby defeat this bear "Veritas." As I have the pleasure of doing business with Mr. Higgs of Penzance, as soon as I saw Captain Anthony's letter in the Journal, I wrote and asked him if he believed Captain Anthony's reports were to be relied on. His reply if I enclose, which, if you deem worthy of a space in your Journal, you are at liberty to insert.

J. G.

"Sir,—In reply to yours of the 19th, I send you the enclosed extract from a letter I received from Capt. Thos. Anthony, and I may add that you may rely on the truthfulness of his report. I have no interest in the mines, but no doubt he has a very valuable mining property under his management."

"SAMUEL HIGGS."

Penzance, Jan. 22.

Extract from a letter from Capt. Thos. Anthony, of Wheal Bilman, South Australia, dated Nov. 21, 1863, to Mr. Higgs, of Penzance.—"Any ability I possess to carry out the business of a mine I owe to you, and I do flatter myself that there is not a mine in this colony that is so conducted as the one I am managing and spend most of my time at; and that arising from my keeping the old track as learnt at home in your mines. In this mine the ground is hard, except that the lode is good; then the ground is easy. Our deepest level is 15 fms. from surface, and the lode is 6 ft. wide, and eight men could keep a little Cornish mine above water on it. At one of our mines in Yudanamutana the lode and stratum both undergone a change at water level. Above the water the ground about the lode was alternately slate, mixed with lime, jasper of a coarse kind, and crystalline sandstone. Below that point we have a pretty blue kyllies, and the mine is black ore; some of that assayed produced 76 per cent. of copper. In this mine we have yet no water, but it is a splendid mine. Up to the present time we have been sending away ore of very high quality, and laying by the low ores for smelting. Our smelting-house is now far on towards completion; the stack is finished, and the first furnace very nearly complete. It will cost in full for smelting 25s. per ton of ore, and when you are told that we have a thousand or two tons of 15 to 20 per cent. lying on the surface, and can keep four furnaces going independent of this, you will see that there is no room for complaint, after only 18 months' working; and I believe we have sent home from this mine alone about 10,000t. worth of ore of high percentage."

NORTH DOWNS MINE.

SIR.—The printed report of North Downs has been just issued to the shareholders. It will be noticed that, although a call of 2s. 6d. a share was made at the meeting, there was only 90t. 0s. 2d. against the mine, four months' costs being charged against four months' ore, and the 129 tons just sold not reckoned in the accounts. The shareholders will be pleased

with the report, but they would have been much more so had the telegram received on the day of the meeting been inserted in it. That telegram stated that "the lode in the shaft had improved to 20t. per fathom," and on the following day another was received at the office, saying that "it had further improved to 30t. a fathom." Now, as this discovery was made 20 fathoms under the elvan, it is considered of the utmost importance to the mine, and yet, strange to say, not a syllable is stated of its value in the report. Is there not some neglect here? If the *Mining Journal* had not mentioned the above discovery last week, the distant shareholders who did not attend the meeting, or who do not subscribe to the *Journal*, would even now be ignorant of any discovery having been made in King's shaft beyond "stones of ore." I advise shareholders to have patience for a month or two. Better times are coming for North Downs.

A CAUTIOUS MAN.

NORTH DOWNS MINE.

SIR.—I have just received the report of North Downs. I would ask the committee and the secretary how it is that no mention is made in the report of the telegram received on the day the meeting took place, saying that the lode in King's shaft had improved from "stones of ore" to the value of 20t. a fathom? also of the telegram received the next day, stating that it was then worth 30t. a fathom?" What are the secretary and committee paid for, if not to take care of their employers? I consider that it is time for them to wake up. There can be no excuse for their omission of the first telegraph, as it arrived whilst the meeting was on; and if they say that the report was sent to the printer before the second telegram arrived, surely—as the particulars of the meeting were not posted for about a week after the meeting took place—a slip of paper should have been printed, mentioning the particulars of the second telegram, and sent to every shareholder with the report. The satisfaction would have been great, and the expense a mere trifle. Those who saw the *Mining Journal* last week are, of course, aware of the discovery, but there are many who, by acting on the "penny wise and pound foolish" system, refuse to subscribe to the *Journal*, and, therefore, know nothing about it. Can it be wondered at that the shares are falling in price?

A SHAREHOLDER.

CENTRAL GRYLLS MINING COMPANY.

SIR.—In the notice of this company in last week's *Journal*, you speak only of a copper lode, and omit to mention the important fact that the Georgia tin lode, so productive in Wheal Grylls, runs through this property, which fact is admitted by the secretary of that company, in his communication to the *Journal* of Jan. 16, and our agent writes us that it is large enough to give £100,000 worth of mineral. It is important that this should be explained, as otherwise it may leave an erroneous impression on the minds of your readers that would not be to the advantage of the company.

55, Gracechurch-street, London, E.C., Feb. 2.

HENRY RHODES, Sec.

THE MINERS' ASSOCIATION OF DEVON AND CORNWALL.—The general meeting of this society was held at Redruth, on Friday—Mr. C. Fox presiding. The secretary, Mr. Pearse, read the reports, from which it was seen that "the demands for the teachers have been beyond our means, and several important districts, which have applied for our assistance in the formation of classes, are still without this aid." The value of the association is unmistakably proved by the fact that several of the students in its classes have been selected to fill offices of trust, and situations requiring superior knowledge, both at home and abroad. The president has liberally given a donation of 50/- to the association, and he expresses his hope that the example set by Mr. Enys and himself may be followed by other gentlemen connected with mining, or owning mineral property, to the extent of relieving the association from debt. During the past year courses of lectures have been given in eight districts, embracing the principal mining localities of the two counties, and about 150 working miners have attended these lectures, not including a much larger number which attended the popular lectures which have from time to time been given in the various districts. The subjects which have been taught are—mechanics, mechanical drawing, surveying, mineralogy, mining, geology, and metallurgy. In nearly all the districts the miners who have attended the class lectures have shown by their diligence and attention to the various subjects taught that the instruction has been much appreciated. The income has more than met the expenditure, and we have been enabled to reduce our debt by the sum of 50/. This increase in our funds has in a great measure arisen by two liberal donations of 50/- each, respectively from Mr. J. E. Enys, in February last, and from Mr. J. F. Bassett, our president; and in part from additional subscriptions to the amount of 40/- from the miners. We have also had many new subscribers to the general fund—making a subscription of 39/-, as against 32/- last year. The minutes contain a record of the appointment of Messrs. R. Pike, W. M. Grylls, and the Rev. S. Rogers, as the executive for the ensuing year; and of Messrs. Bolitho and Vivian as vice-presidents, in the room of Messrs. Treffry and R. Fox, who retire by rotation.

LECTURES FOR WORKING MEN—METALLURGY: SILVER.—Dr. Percy gave a lecture on this subject, at the Royal School of Mines, Jersey-street, on Monday last. Silver was known at a very remote period; it is the whitest of all metals, not excluding tin. It is a very malleable and ductile metal—a grain of it may be drawn into a wire fully 40 ft. long. Silver melts at a red heat. Its specific gravity 10.5, atomic weight 108. It does not suffer any sensible change when heated in a dry atmosphere, but when heated in contact with oxygen at a high temperature it does not oxidise, but absorbs this gas, giving it off when cooling. Silver has a strong affinity for sulphur, as may be well seen in London. The lecturer then alluded to what is called oxidised silver, which, he said, is a misnomer, being "brinstonised." Reference was made to Pattinson's process of desilverising by means of cyanisation. The Mexican amalgamation was then explained. It consists in stamping the ore, and subsequently reducing it to a state of mud by means of crushing-mills—arrastres. It is now mixed with copper pyrites, magnetite, and common salt; after so prepared and trodden out by mules, mercury is added through a filtered bag. The chemical changes involved are complicated in their nature, the result gained is a proto-chloride of mercury, and an amalgam of silver and mercury; this amalgam is reduced by the application of heat, which drives off the mercury in a state of vapour, and the silver is obtained pure. There is a great loss attendant on this process, fully 35 to 40 per cent. The lecturer then gave a description of the Freiberg and wet methods for the extraction of the metal.

OPEN MINE SHAFTS.—An inquest on the body of Mary Bawden, who died from falling down an open shaft at Unity Wood Mine, near Chacewater, Cornwall, was concluded on Tuesday afternoon. The jury, in returning a verdict of "Accidental death," expressed their regret that abandoned and other shafts in Wheal United Wood had not been properly fenced, in accordance with the covenants of the sett. They hoped also that lords and adventurers would see the necessity of securing all shafts in a safe condition, and suggested that in the meantime the waywardens of mining parishes should give notice of all shafts in their neighbourhoods requiring protection; also, that the attention of the Home Secretary should be called in the statute 23rd and 24th Vict., cap. 151, with a view to the extension of its provisions to mines of this description.

PREVENTING INCINERATION OF STEAM-BOILERS.—Mr. John Travis, of Royston, Lancashire, proposes the use of Irish moss, or silicate, arsenite, or phosphate of soda, to prevent incineration of steam-boilers. From 6 lbs. to 8 lbs. per week usually suffices for a 40 or 50-horse power boiler.

INDURATION OF STONE.—Mr. F. S. Barff, of Dublin, for preserving and hardening brick, stone, and other surfaces, and timber, proposes to use soluble silicate of soda, or of potash, by preference the silicate of potash with a mixture of sulphate of barites and carbonate of lime. The mixture is laid on with a brush.

Meetings of Public Companies.

LONDON AND COUNTY BANKING COMPANY.

The general meeting of proprietors was held at the London Tavern, on Thursday, Mr. NICOL, M.P., in the chair.

MR. CLAPPISON (the secretary) having read the notice convening the meeting, submitted the report of the directors, which appears in another column.

THE CHAIRMAN said the balance-sheet had given the proprietors the account of the result of the business of the bank during the past year, but they, no doubt, naturally wished to have some details to show the progress that had been made, the position the bank at present occupied, and its future prospects. During the last two years there had been a steady increase in business and profits, and the report submitted to-day certainly did not show that there had been a falling off. In Dec., 1862, the balance due to customers stood at 7,151,158/-, and the liabilities on acceptances 419,368/-, making together 7,570,504/- In December, 1863, the balance due to customers was 8,245,722/-, and liabilities on acceptances 1,788,916/- Those items in favour of 1863 showed an increase in customers' balances of 1,904,586/-, and in other liabilities of 722,542/- Upon the other side of the account, in December, 1862, the Government and other stocks amounted to 755,509/-, and in December, 1863, to 955,095/- showing an amount in favour of 1863 of 194,286/- Bills discounted, and other sources of profit in December, 1862, amounted to 5,345,722/-, and in 1863 to 6,754,841/-, making a difference in favour of 1863 of 1,439,110/- The gross profits in 1862 were 236,129/-, and in 1863, 412,625/- leaving a difference in favour of 1863 of 126,596/- The gross profits of this bank were now greater than any other joint-stock bank in England, and, perhaps, in the world. It must be added that their expenses were also heavy, for there were now 125 branches, and 555 persons employed; and that, notwithstanding the new banks that had been established, theirs (the London and County) had added no fewer than 3645 new accounts during the past year, making the total number 35,637. During the last half-year two new branches had been established, one at Hackney and the other at Limehouse, and both were beginning to give promise of being very successful; and a branch office had been taken in Holborn. Several country branches had also been opened; in fact, there being so much competition, it was their duty to be vigilant, so as to maintain the ground this bank had acquired. He mentioned that the decision given by the Master of the Rolls in a suit brought against the bank had, under the advice of two of the most eminent members at the Chancery bar, been appealed against, under the full conviction that it would be reversed in a superior court. Although the directors entertained little or no doubt that such would be the result, yet they thought it prudent to carry forward a larger sum from the profits of the past half-year than they would have done but for that decision. He now came to another point, which was this—the directors thought that the time had arrived when the London and County Bank should take a foremost position among joint-stock banks; with that view, the directors thought it advisable to largely increase the capital. When this operation had been completed, the capital would be three-quarters of a million and the reserve fund a quarter of a million, making together a million sterling. For years past it had been their policy to increase the reserve fund, but he hoped, when this great increase of capital had been made, there would be no longer an occasion to add further to the reserve fund, but that they would be able to divide all the profits the bank made. He intimated that the capital would be called up during the ensuing fifteen months. Taking the present rate of interest into consideration, it was thought to be advisable to press as lightly as possible upon shareholders in making this addition to the capital. It was proposed to call up the money in instalments of 10/-, 5/- on account of capital, and 5/- on account of the reserve fund. The capital called-up would be entitled to the full share of dividends. It was proposed to call the first instalment on March 15, the second on August 15, the third on Dec. 15, and the fourth on April 15, 1865; but it would be in the power of those shareholders who chose to pay up in full, and to receive the full dividend upon its position with a great degree of satisfaction, and that they might look forward to a bright future, he concluded by moving the adoption and reception of the report and accounts. —MR. CHAMPION JONES (deputy-chairman) seconded the proposition.

A PROPRIETOR congratulated the directors upon the manner in which they had managed the bank, which was now one of the established monetary institutions of the country. —THE CHAIRMAN (in reply to a question) stated that two sets of inspectors were constantly employed in thoroughly examining the accounts at the several branches.

The report was received and adopted unanimously, and a dividend of 6 per cent., together with a bonus of 6 per cent. (both free of income tax), for the half-year, were declared. —The retiring directors were re-elected, and the auditors were re-appointed; Mr. Norman was appointed auditor.

Mr. GOLD proposed a cordial vote of thanks to the Chairman and directors for the able manner in which they had conducted the affairs of the bank. —MR. RUSSELL seconded the proposition, which was put and carried unanimously.

THE CHAIRMAN acknowledged the vote, and stated that if any one thing were more satisfactory than another to a board of directors it was such a vote as that just passed. And the manner in which it had been received by the shareholders he felt assured would be an incentive to the directors to redouble their exertions for the benefit of the bank.

A special vote of thanks was passed to Mr. M'KEWAN, the manager, who acknowledged the vote in appropriate terms.

MR. CLAPPISON (the secretary) acknowledged the vote of thanks to the officers of the bank. The proceedings terminated with thanks to the Chairman.

EAST ROSEWARNE MINING COMPANY.

A general meeting of proprietors was held at the company's offices, Austerlitz, on Monday, Mr. J. ROWLANDS in the chair.

MR. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. A statement of accounts for four months, ending with costs for Nov., was submitted, from which the following is condensed:—

Balance last audit	£ 263 15 2
Copper ore sold	2073 4 4 = £ 2336 19 6
Aug. mine cost, merchants' bills, &c.	£ 504 3 0
Sept. ditto	433 15 8
Oct. ditto	480 15 3
Nov. ditto	497 19 4 = 1916 13 3
Leaving credit balance	£ 420 6 3

The report of the agent was read, as follows:—

Jan. 29.—I herewith inform you that in the past four months Hallett's shaft has been sunk 1 fm. to the 75, on a lode about 1 ft. wide, worth for length of 10 ft. 16/- per fathom. We have driven the 75 east 4½ fms., on a lode about 8 in. wide, producing a little ore, but not much to value. In the present end the lode is a little more promising in appearance, and producing stones of ore. I think there is another branch to the south; this will shortly be proved by cutting a plat east of the shaft. We have driven the 75, west of Hallett's, 9 fms., on a lode varying from 1 to 2 ft. in width, and in value from 10/- to 20/- per fathom. The average value of ground opened in this level is about 16/- per fathom. In the present end the lode is 2 ft. wide, of a very promising character, worth 20/- per fathom; this is under the slide, and there is every reason to expect that it will be equally good over it, as it was so at the shaft. We have two men stoking the back of this level, where the lode is 18 in. wide, worth 16/- per fm. We have driven the 65, west of Hallett's, 5 fms., on a small unproductive lode, and in the evans about 9 feet. This being poor and hard, we have suspended the driving, and as we can drain the western ground by rods through King's shaft, there will be no necessity for driving through the hard evans in every level. We have also driven this level on a south branch about 6 fms., which was worth for a small length 12/- per fm., but is poor in the end, and suspended. These branches will intersect a little below the level, and there is every reason to calculate on a good lode from this intersection to the 75, as we have it there. The sum-wings have been sunk 2 fathoms to the 65, on a lode about 10 in. wide, worth 9/- per fm. The 65 is driven east of wing 4 fms. 4 ft., on a lode from 9 to 18 in. wide, containing some little branches of rich ore, worth at times 8/- per fm.; this driving is suspended, as we are stoking the end of ground to the depth of the level. The lode in the present end of ground and back varies in value from 12/- to 25/- per fm. The 65 is driven west of sum-wings 9 fms. 5 ft., on a lode about 1 ft. wide; the first 8 fathoms is worth 10/- to 12/- per fm.; for the last 2 fms. the lode has been split into two parts, both poor in the end, but the south part bearing a good branch of ore in the back of the level. These branches are now closely approaching each other, and the south one is worth in the end 8/- per fm. I expect a further improvement here shortly. We have driven the 55 west 1½ fm., on a small lode, producing a little ore, but not to value; this driving is suspended for the present. Within about 3 fathoms of this end we are rising again at King's shaft, and are up about 7 fms.; for the first 4 fms. the lodes produced stones of ore only, but in the last 3 fms. it has been improving, and is now 14/- wide, worth 10/- per fm. If this ore dips west, which I think it does, it will be an inducement to drive the 55, when King's shaft is completed to that level. We are working two stopes in back of the 55 west worth, respectively, 10/- and 14/- per fm. We have sunk King's new shaft from surface to adit, and timbered the same; also holed it to the 43. This shaft is now cut down and timbered complete to within about 5 fms. of level. I calculate at about the end of next month we shall have it all right to the 55, and commence to sink below.

The lode in the bottom of the level, at this point, is worth from 8/- to 10/- per fm., and it is much better dipping towards it from the east. We have driven the 12, on the new north lode, 7½ fms.; the lode is small, but promising.

In consequence of the ground getting hard it is suspended. The cross-cutting towards this lode, in the 55, will be a matter for consideration when King's shaft is down.

We have six pitches worked by 18 men, at tributes varying from 9s. 6d. to 13s. 4d. in 17.

25f. per fathom. The present prospects are of a very encouraging character, and further improvements may be anticipated, not only in reference to the discovery now made, but in other important points in the mine—HINGTON DOWNS is reported to have further improved in the 110, where the lode is worth 75f. per fathom. A telegram was received last evening, stating that the 110 west was worth 120f. per fm.

NORTH CROFTY is represented as opening out some valuable grey ground. The 170 east is worth 40f. per fm., and the rise above 25f. per fm. The 160 end east is valued at 35f. per fm.; a winze is being sunk in this level, 5 fms. in advance of the 170, where considerable results are expected, from the present value and general appearance of the lode. The several slopes, varying from 12f. to 20f. per fm., continue to look well.

BRYNTAIL.—It is gratifying to learn that this mine is now likely to take a standing position among the profitable mines of North Wales. The lode in the 20 end is now worth 30f. per fm. for lead, and they have passed over a splendid lode for 11 fathoms in length, on the south part of the lode; the north part not yet seen.

VIGRA AND CLOCAEN.—Private information from the locality of the mines is of the most extraordinary character as to the quantity of gold now produced from the quartz. The yield has been on the weekly increase for some time past, and the future returns are looked upon as fabulous until confirmed by official reports. The produce for the past week is stated to be from 25 lbs. to 30 lbs., and the quantity for the next four weeks will, in all probability, amount to 112 lbs. The gold is disseminated throughout the quartz, and visible to the naked eye, and has been proved for a considerable length, as well as in the rise above the 10 fm. level. There are several other sets which are likely to come into special notice shortly by the discoveries recently made.

EAST WHEAL FORTUNE, in Stithney, is represented as holding out considerable promise. The operations both at surface and underground are going on rapidly and satisfactorily, and the position of the set, in the centre of some of the richest tin mines in the country, renders the mine one of great importance.

EAST LOVELL.—If there be any merit to anyone who will publish false statements and misrepresentations to lessen the value of property for their own aggrandizement, then the "bears" of this stock are entitled to all the advantages derived this week through the instrumentality of their ingenuity in scheming. A large number of shares have been borrowed to supply the pressing necessities of the week, which has enabled them to procrastinate the evil day to another of a brief period only. The reports received from the mine are of the same flattering and encouraging character, and leave no doubt as to the future; this can be borne out by the report of Capt. Charles Thomas, who inspected for the shareholders at the last meeting, a summary of which is subjoined:—Two lodes are being worked 7 fms. apart, each underlying north—South Lode: The shaft is down from the surface 17 fms.; 4 or 5 fms. deeper will fall in with the lode. Peter's shaft is sunk 20 fms. perpendicular, which will take the lode in 6 fms. deeper. The 20 west is driven 10 fms.; first 4 fms. of little value, next 4 fms. will average 35f. per fm., last 2 fms. of no value, but lode in end contains very good tin, and indicative of early and great improvement. No ground stopped; back and bottom standing entire. The north lode, intersected by a cross-cut from the 17, has been sunk 9 fms., and explored west 7 fms., where the diagonal shaft commences, and sunk 7 fms. deeper. The back of the 26, for 6 fms., yielded tin from 40f. to 60f. per fm. The diagonal shaft, below the 26, is getting into order for sinking on the course of the lode. The lode here is 8 fms. wide, worth full 100f. per fm. for the length, and working by ten men. The lode in the 20, west end, is worth 60f. per fm.; no north wall reached near the end; the back, 4 fms. behind, is worth 40f. After referring to the system of working, he fully concurs in considering this to be the best means for securing the most eligible spot for sinking the engine-shaft. Referring to the eastern ground, he considers that when the shaft is brought into full course of working (in a few months) the eastern ground will be explored with good prospects of success. The whole is summed up under three heads.—1. Although expensively worked by ancient timmers to 14 or 18 fms. deep, it is still in its infancy—2. The success attending the present workings has been very great; "not only in the amount already realized by sales of tin, but also in the quantity of tin already explored for stopping at will."—3. The three important points—sinking the shaft on a course of tin worth 100f. per fm.; driving the 20, worth 60f., and in a few months the 26 east, and the old workings, the character of the granite, geological position, and two lodes so near each other, being of the most favourable kind. No ground is being worked without being properly drained and ventilated—little water, and the engine of sufficient power to sink to a great depth; and concludes by stating that the mine is showing indications of more permanency and more tin since he last inspected it, on Dec. 12. JAS. LANE.

From Mr. W. LELEAN.—The Mine Share Market is rather dull, and speculative shares find little support. This is not likely to last long; as spring advances, with a good standard for metals, the public will be induced to invest freely. EAST LOVELL MINE continues to look remarkably well; in fact, this day's report is better than it ever was; lode in the shaft sinking by ten men, full 8 feet wide, worth 100f. per fathom. The 20 end, on the north lode, driving by eight men, worth 70f. per fathom; the stope working by six men, worth 50f. This is a first-class investment for capital at present quotations. NORTH MINERA: The ground in the shaft is more favourable for sinking, and the agent is very sanguine of its becoming a great and leading property. BEDOL-AUR: The reports from this mine are good, with anticipations of early success. BEDFORD UNITED is worth attention. EAST TRESKERBY continues to improve. AT WHEEL CROMBIE they have the lode under the cross-course in the shaft, as predicted by Capt. John Nancarrow in his report some months since; favourable results may now be looked for. There are a great many other mines selling at a very low price worthy of notice, where successful results are almost certain.

From Mr. JAMES CROFTS.—The apprehensions which have existed for some months on the subject of war have resolved themselves into a fact, and we have begun and thrown the country of Hamlet into a theatre where once more the ambition of rulers is likely to create a deadly struggle for territory; but, as if to show the injustice committed by the aggressors, the sympathy in this country is almost, if not entirely, on the side of the Danes; and, whatever the result, no doubt seems to exist but that England cannot remain neutral; whilst France, "for reasons," will look until the time arrives to join in the game. Thus, Europe appears to be on the threshold of stirring events, of which the finale can scarcely be guessed at, unless the bravery and resources of Denmark can be brought so effectively forward as to turn the scale in her favour, which is an issue scarcely to be expected, but not absolutely impossible. Whilst, however, this momentous question is in agitation, it is probable, as regards all descriptions of stocks and shares, that the public will be more disposed to realize than invest as a rule, but to which there will, of course, be exceptions.

The Mining Market during the week has been remarkably buoyant, the business in which appears now capable of forcing its way into more prominent notice even under adverse circumstances, amply proving the strong hold it has now attained over a large section of speculators; and were it not for occasional drawbacks, arising out of investments in "spurious" concerns, and others not so intrinsically, but in their progressive states, lading adventurers with heavy calls, which come "fast and furious," this market would occupy a position comparatively second to none. This improvement in its aspect arises in a great degree from the concentration of the intellect and industry bestowed upon it, and the exclusion of nearly all other items of bargains and sale except British mines—every other branch of speculative and investing business attempted within its area becoming, so to speak, "like a fish out of water"—instance, in proof, the very important branches of British industry, slate shares, iron and coal concerns, often attempted but never successful; and thus in no department of share dealing are the individuals engaged in carrying it out so well qualified to go beyond the merely mechanical business of buying and selling, and to give advice as to the approximate value of shares, and the periods suitable for operations in them. Some injustice is, however, often done to brokers by reflections on their judgment, when losses instead of profits accrue; and as a consequence, and under the influence of disappointment, shares are too often given away under the name of a sale, and thus how often is it seen that shares from 6d. rise to fabulous values; whereas it ought to be reasoned that if it is worth the while of A to buy a speculator a particular share, it is equally worth the while of B (a speculator also) to hold it. It must be understood that these reasonings are general, and neither directed towards particular instances or particular individuals, but they are, nevertheless, incapable of contradiction.

PROSPER UNITED shares, some six months since, nearly unsaleable. A large amount of capital had been subscribed in a very short time, and liberally expended in work and machinery. On December 31, 1862, on 6000 shares there was paid up nearly 40,000f., at which date they were quite nominal in value—no price quoted. To-day there is 7f. 1s. 6d. called up, and the price (buyers) is about par. A change of management appears to have been a most effectual step on the road to the true development of its resources for copper ore, mainly assayed, however, by some very spirited and monied parties, who, under the most adverse circumstances, were rather buyers than sellers of the shares, to whose tactics, at a critical period in the history of the mine, the present satisfactory results are mainly to be attributed. A meeting of the committee of OKEF TOR was held on the 3d inst., when the monthly sale of ore reported was about 120 tons, realising under 600f., being above 5f. per ton average, and showing an important fact, that the quality of the ore is greatly improved. It was stated by the writer's informant that there may be one other call required, and a recommencement of dividends quite probable within six months. The shares have, consequently, advanced from 2f. to about 3f., and as they will be sought for, a further advance is inevitable. The question of the future management of this mine, which is conducted at Calstock, in Cornwall, by the highly respectable purser—Mr. William Channing, and a committee, is beginning to occupy the minds of some of the adventurers, and the writer is happy to add, in an untried spirit. That the writer, too, had his thoughts about the matter is shadowed forth in a few words he wrote on December 26 last (see page 928 of the *Mining Journal*)—"Okef Tor on fetched 3f. 5s. per ton, but not stated where sold or who were the buyers." He is now informed that the ores will be in future sold publicly—a good resource; and as regards the future management question, were it in an influential London office, reserving the partnership in the county to its present possessor, all parties interested, and the shares also, would be sensibly benefited. EAST WHEAL RUSSELL looks well for becoming, before long, a permanently satisfactory property. The shares have reached above 5f.; and it may be information to some to state that a large number of shares have lately changed hands into Devon Consols proprietors, on an inspection by one of the agents of those mines, whilst Cornishmen have also lately purchased some hundreds, the suggestive importance of which may easily be appreciated. There is a wide gap, however, between 5f. per share and 32f. or 33f., at which they were saleable two or three years since, although the mine is in a more advanced stage of development now than at the point indicated. WHEAL BULLER was before yesterday in a moribund condition, but sudden improvement is announced, and an advance of about 20f. per share. This veteran in the Cornish list is in only 256 shares, with 10f. each paid; and after paying 920f. per share in dividends, discounting the March, 1861, 5ANGLES shares have advanced to 34, and there is a good general enquiry for WHEAL BASSET, SOUTH TOLQUATH, HINGTON DOWNS, East and West CARADON, NORTH CROFTY, CLIFFORD, and GOWANWELL. EAST LOVELL shares have received (why?) from 10 to 10½f. ex div. of 7f. 6d., to a quotation of 8½ to 8¾. They should be bought. IN LEAD MINES the dominant ones are WEST CHIVERTON and WHEAL CHIVERTON, which continue in good favour, the latter at advanced rates, founded on reports of its merits, some of which go so far as a favourable comparison prospectively with West Chiverton, which at the price of the latter being 56f., and the former 51f., 10s., to 12f., there appears good scope for profits on purchases made now. BRYNTAIL shares are steady, and undeniably good.

BRYNTAIL HALL is making great strides in the right direction. A report dated Jan. 30 (not official) states that a great improvement has taken place in Davis's vein, which the captain reports was three times better than when last reported in the Journal, being worth 2½ tons per fm. On the Milver vein they had also gone through a solid leader of lead, which will have to be followed. Large lumps of lead, with the prospect of a rich run of ore at hand. The shares have advanced considerably, and in demand, but very few for sale, the whole being only 200 shares. The adjoining mine and same lodes, BEDOL-AUR, progresses beyond anticipation, and really bids fair to become an early success, the agent reporting that "he may drop upon a deposit of ore any hour" in Simmenden's shaft. The other shaft is also producing stones of ore. A report from the scorey (who has a practical knowledge of mining) will state the result of his inspection of this property. No more eligible share, or one with better prospects, can be offered to the public. CENTRAL MINERA shares quiet, buyers being cautious in making offers. For investment, no better stock on the market. BRYNTAIL shares in demand, but very few for sale—the improvement is of a bona fide character. The lode in the 20 west is worth 30f. per fm., and a capital lode in the bottom of the level. The writer was strenuous in recommending this property when 5s. to 10s. was the market value. WHEAL HORN is doing well—good sales of silver-lead ore. WHEAL LUDCOTT is a share to buy at the quoted prices, but not to sell. WHEAL UNIT shares steady in price, and not likely to advance upon the rise already added to a much

lower price. The writer is glad to find that several of the circulars issued by respectable brokers adopt a cheerful tone when discussing the aspects of the market, and recommend for purchase to pay large profits number of mines, in which they are more or less interested, amongst which are WHEAL GRYLLS, HOPE, GREENVILLE, NORTH TRESKERBY, EAST GREENVILLE, EAST KUSSELL, GREAT WHEAL BUSY, HINGTON DOWN, BOGCAWN, "and half-a-dozen others," and if this enumeration be taken as a fair sample of the others so named, the advice may safely be followed; and to attain this end the quotations of the shares and the condition of the respective mines can always be ascertained through the ordinary channels of information, apart from the individuals who advocate their merits, the test of a really good share being this—Can it be sold as well as bought?

From Mr. EDWARD COOKE.—There has been a large amount of business done during the week, and a very active market. The stability of the prices of good mines contrasts very favourably with that of many of the speculative stocks usually dealt in on the Stock Exchange, that has recently had such a downward tendency. It may have been noticed that, during the war with Russia, when almost every security was more or less depressed, in consequence of the war, the Mining Market was comparatively active. I do not, therefore, anticipate that a continental war would have a prejudicial effect on the price of metals, and consequently, the price of shares would maintain their value. No one who is not entirely blinded by prejudice would contend that such stock as Mexican, Greek, or Spanish bonds are as good a security as there are thousands of the British public who invest their capital upon the faith of what has hitherto been proved to be faithless Governments, from whom they are not likely ever to receive either principal or interest, rather than invest any capital they may have to spare in good British mining property.

The most promising progressive copper mine in Cornwall is undoubtedly NANGLES. It adjoins the richest copper mine in Cornwall—Clifford, and, according to present indications, it promises also to become a very rich mine. The lode at the shaft, for the last 5 fathoms sinking, has been in a good course of ore, and if it proves equally rich for the next 5 fathoms, of which there appears to be no doubt, there is every probability of those shares going to 40f., or even 50f., per share. The financial position of the company is sound, and the management unquestionable. The shares are largely held by Cornish adventurers, who know the real merits of the mine. The number of shares is 1024 only. At NORTH CHIVERTON the prospects are very cheering. The deposit of lead in the 19 was discovered by the parties who worked it, or I may say trifled with its working, some two years since. The lode was cut by them in the 10, which caused such an influx of water that they were obliged to abandon it for the want of adequate machinery. The new 50-inch engine, which will be erected forthwith, will preclude the possibility of being overpowered by water again. When the lode is cut in the 20 fm. level, which will soon take place, it is only reasonable to expect it will be found productive. NORTH CHIVERTON has all the elements necessary for a successful enterprise—capital, good lodes, producing both lead and blende, and a beautiful enamel of ground or a lead-bearing character. There is about 5000f. unexpended; therefore, no call is ever anticipated. The mine is situated in the immediate Chiverton district, and, judging from the parallel lodes of West Chiverton are doing, there is scarcely a doubt of its becoming a successful concern. At CHIVERTON MOOR the operations are limited principally to preliminary arrangements for the erection of the new 70-inch cylinder engine. It may not be amiss to remind my readers that this mine immediately adjoins West Chiverton to the west, having the same rich lodes; and, what is most important, the large deposits of lead in that mine are dipping right in the direction of Chiverton Moor. The shareholders in this mine must not be disappointed at not having any riches as yet in their property. Nothing as yet been done towards its development, but as the spring advances it will be worked energetically, and no one acquainted with the locality in which Chiverton Moor is situated doubts for one moment the results, when the operations are fully carried out. I suppose there is not a more valuable piece of unworked lead ground prospectively in the county of Cornwall. There is a capital of from 8000f. to 9000f. unexpended. Those who buy the shares now, and hold them for six months, will see such a return for their outlay as will convince them that mining is a profitable as well as an honourable pursuit.

For a great many years, until recently, the once-celebrated Marazion district has been comparatively neglected. The prosperity of WHEAL GRYLLS, however, gave a stimulus to mining operations in its locality, and it affords me great pleasure to witness the prosperity attending some of the other mines in that once-famed district, the most extensive among them being PROSPER UNITED, which is another instance of the property of not being damaged if success does not immediately attend the efforts to bring a mine into a profitable state. From being a losing concern, and constantly extracting money from the pockets of the shareholders, it has, by judicious management, been brought into a highly profitable state. There should be no rivalry in mining operations, and every successful concern ought to be a source of gratification to all who are well disposed to legitimate mining enterprise. In the present day, however, there are so many what are termed new mines after some of the more successful ones. Of course, "a rose by any other name," &c. still, I repeat, it is well to be cautious, and ascertain in what relation some of these new concerns stand with regard to their position to mines whose names they have taken. Immediately adjoining WHEAL GRYLLS, and between the latter mine and PROSPER UNITED, is GRYLLS WHEAL FLORENCE, a mine that has recently been bought from a party who either could not or would not erect an engine upon it, although encouraged to do so from the fact of there being about 3000f. worth of tin raised above the shaft from only a few fathoms of ground in length. In the adit level the rich standard lode has been driven on by the Wheal Grylls Company right into the set, and from a small piece of ground 300f. worth of tin was raised in one month by four or five men. This same standard lode, and its branches, have been known to have produced about 70,000f. worth of tin in the mine to the east. When the engine is erected in Grylls Wheal Florence, and the lode wrought on below the adit level, no doubt it will be found equally as rich in this mine. At any rate, there is everything at present to justify this expectation, and of Grylls Wheal Florence being a very important and profitable mine. Having recently spent a few days in the Grylls and Chiverton districts, I was enabled to form an opinion of the prospects of some of the mines situated therein. At EAST GRYLLS everything seems to be going on well. The stamps are already at work, and in the course of a few weeks a good parcel of black tin will be sold from this mine. I say black tin, because it will be remembered that previous to the engine being erected a large quantity of tin was sold in the stocks both by the present and former company, which was raised above the adit level.

Before Midsummer next this mine will be returning large profits to the shareholders, and I may venture to say that by that period it will have entered the Dividend List, and thus realize a sum I have hitherto predicted concerning it. Adjoining East Grylls, to the south, is GREAT WHEAL GRYLLS, which has but recently been put to work (by the present company), and is already more than paying its cost, with every prospect of becoming one of the best dividend mines in the locality. With regard to Wheal Grylls, I may say that, with the exception of the falling off in the value of Georgia lode, the prospects of the mine were never more brilliant. It may not be amiss to remind the shareholders that the permanent prosperity of their property is not by any means dependent upon the Georgia lode. There are many other lodes in the set, the most important among them that have already been discovered being the Standard, Fisher's, and the Middle lode, the whole of which are profitably productive, and contain large reserves of tin ground. At the last meeting it was resolved to forego the dividend for the purpose of erecting some twelve or sixteen heads of stamps, with a view to increasing the returns of tin. When this is done regular dividends will be resumed, and with the very large addition of valuable mineral ground that has been added recently to the Wheal Grylls set, there is everything to indicate its being a permanent dividend property for many years to come, and if the same plan had been adopted with regard to this as is the case with railways to call up capital for the purpose of supplying plant, Wheal Grylls would have paid very large dividends on the present price of the shares; instead of which some 5000f. has been paid for machinery, dressing-floors, &c., during the last two years, entirely out of profits, and 6f. per share paid to the shareholders in dividends in the same period. The Marazion and Breage districts show evident signs of becoming, as it once was, a very important mining locality, and I have no doubt that with judicious and honest management it will prove highly remunerative to those who invest their capital in it. At the same time proper caution should be observed by those who are disposed to adventure in the district. Let them see well who are the promoters, and as to how they stand in the estimation of the mining world generally, and whether ample capital be subscribed, and let them see that the capital be applied to the legitimate purposes of mining operations. So many ephemeral schemes have from time to time been brought before the notice of the public, that it behoves everyone having the welfare of British mining at heart to speak out on those points, regardless of the displeasure of some of those promoters who never manifest any real intention to work mining property legitimately.

In the Chiverton district great activity is going on. WEST CHIVERTON is certainly opening up a wonderful mine. The present dividend of 15s. quarterly is only an earnest of what may by-and-by be expected. It cannot be said that this mine is now being worked for the purpose of unduly elevating the price of the shares; were that the object of the management, there would be no difficulty in increasing the already large monthly returns of lead, and thus enhance the profits, which in the last quarter was some 2500f., besides paying about 800f. for new pitwork, and which may be termed plant. During the present year the dividends will most probably reach 2f. per share quarterly. The continued prosperity of this mine cannot fail to enhance the value of CHIVERTON MOOR, which adjoins it, the shares in which are 2f. lower than the highest point reached, and whoever buys them will, by-and-by, reap a large profit. At NORTH CHIVERTON I found everything going on in a business-like way. Engine-house in course of erection, shafts and levels being cleared up, and a very good parcel of blende being got ready for the market, and when the communication with the 20 is effected the lead lode will be worked on under most favourable circumstances. Without wishing for one moment to detract from the merits of any of the other mines in the district, I can positively say that none, with the exception of West Chiverton, show anything like the prospects of success that North Chiverton does, and this I am sure would be corroborated by any impartial practical agent. WHEAL KITTY (St. Agnes) has fully borne out what I have on former occasions said about it. The report of the agents, and the statement made by Capt. Teague at the meeting, relative to the future prospects of the mine, are most gratifying to the shareholders. It should be remembered that Captain Teague is not a man who talks flippantly or carelessly about a mine. I again repeat that the shareholders in Wheal Kitty are very much indebted to him for the services he has rendered them in his unwarred attention to the efficient working of the mine, and the laying out the new dressing floors in so complete a manner, whereby the tin can be returned in larger quantities, and at less cost. The cross-cut in the 80 is a very interesting point. If the lode is found asrich as anticipated at the point of intersection the shares will be worth double their present price, and they are now paying 12½ per cent. per annum. Tinctor shares have been in good demand, with an absence of sellers. Nothing further can be said about Tinctor Mine than it is one of the best, if not the very best, mining properties in Cornwall.

One of my objects in writing is to point out to the readers of the Journal (who, at a long distance from the mining districts, are not acquainted with the merits of the various mines) those mines that I consider are selling at prices much below what their real merits warrant. How far I have been successful may be seen by a reference to the present price of the following mines—Tincroft shares, at 5 to 5½. I constantly advised my friends to buy them—now 20f.; Wheal Kitty, at 4½ to 5, now 8f.; Wheal Grylls, at 5 to 6, now 28f.; East Grylls, at 3, now 14f.; and others have advanced almost in the same ratio. I would not, however, lead my readers to suppose that success has attended all my predictions, still the balance is favourable to those who followed my advice. Bassett and Grylls shares are now selling much below their intrinsic value, and the public will yet realize the fact that Illogan, Grenville, Caradon United, and New South Caradon have been sadly overlooked by them. The whole of these mines are well deserving attention, and will see a much higher price during the current year.

SOVEREIGN GOLD MINING COMPANY.—A report of the operations carried on at the mine during the past three months has been published. The directors have made a call of 2s. 6d. per share. The erection of the water-wheel and stampas has been delayed through Mearns, Nicholls, Williams, and Co. being two months behind time in delivering. They now promise to complete the order in a fortnight. The stamping machinery is to be erected near the Tan-y-Graig; roads have been made and stone quarried for the necessary buildings. Smiths and carpenters' shops are erected.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

EAST WHEAL RUSSELL

the stratum to be a mineralised one, as precisely the same kind as that found in connection with the rich lodes in the Devon Great Consols. The cross-cut I consider a good speculation, as there is but little doubt that the Devon Great Consols lode is before you, which you may expect to cut shortly, and also other lodes known to exist to the north.

Provided the same stratum continues, there is every reason to expect good results when the lodes are intersected." This coming from one of so much experience as Capt. Goldsworthy, especially in that locality, seems certainly of some importance.

At the present moment there is, perhaps, no more interesting point to come off in the mining world than that which is to decide whether the Great Devon Consols people have by some freak of Nature got it all to themselves or not. The shareholders of East Devon Consols are disposed to think not.

PENDEEN CONSOLS.—The stamps are at the present time returning above 5 tons of the per week. Notwithstanding the quantity of tinstuff required to form the floors, and the necessary delays invariably occasioned when starting new tin-stamps, it is fully expected that 35 tons of tin and 110 tons of copper ore will be sold for the two months, and before the meeting on March 1. The tin will average between 67. and 68. per ton. Expenses for the two months about £1400.

FOREIGN MINES.

ST. JOHN DEL REY.—Produce, 10 days of Dec., 10,630 oits.; yield, 5-737 oits. per ton. The hauling chain breaking twice, caused a deficient supply of ore; now working regularly.

UNITED MEXICAN.—Guanaxato, Dec. 19: Mine of Jesus Maria y Jose: All work connected with the shaft having been completed, the new cross-cut of San Carlos, which will explore a large extent of the vein, and at a great depth, has just resumed. The front of San Juan has much improved, it is 4 yards broad in ore, and with the poso and contracielo, will produce a considerable amount of ore of a fair ley. Other works proceed with little variation; the necessary supply of about 1200 cargs per week for the haciendas is well kept up, but there is no surplus for sale, except that extracted by the bucones, which, in four weeks, has been 2495 cargs, sold for \$10,683, half on the mine account. The result of last month was an apparent loss of \$3186 gold, as before, not included; but this day two raspas have been received, worth about \$16,000, and this will ensure a fair profit on the three months.—Remittance: I have availed myself of an opportunity to obtain bills on Paris, at 60 days' sight, to the amount of 190,600 francs, and I shall be enabled to send an equal or more sum as soon as the conducta is dispatched or more bills can be procured.—Note: The directors are in receipt of the above-named bills.

CORIACO.—G. Matthews: Checo Mine: In the 60 fathom level, east of Price's shaft, the lode in the end driving east is poor. In the 65 chifon, sinking east, the lode is 2 feet wide, producing some good stones of ore—very promising. In the 65 chifon, sinking west, the lode is 2½ feet wide, but poor. In the 50 fm. level, east of Price's shaft, the lode in the end, driving west, is 3 ft. wide, producing a small quantity of ore—very promising. In the 50, No. chifon, sinking west, the lode is still very promising, but less profitable as yet. In the 40, west of Price's shaft, the lode in this chifon is much the same as when last reported. In the 40 fm. level winze, spoken of in our last remarks, we have commenced to sink at the bottom; the lode is 1½ ft. wide, but little has been done in the stopes over the 40, the men having been employed in picking over the ore stuff accumulated at the bottom, trammeling and throwing down stuff from the upper levels, building walls, &c. We have now resumed stowing by 12 men; tide yielding about 1 ton per cubic fathom. On Saturday we shall sample a parcel of ore, compute 50 tons, for sale on the 15th.

BRYNFORD HALL.—Thomas Pierce, Feb. 4: We are still looking much better at Davies's vein, west from Dunsford's sump. The forebreast of the 77 yard level is full of good saving stuff, and if it continues as it now is, it will soon pay for all the expense that has been incurred in opening this mine; indeed, it is looking well. The 36 yard level, north-east from Granger's shaft, has been driven 37 yards: the vein now runs due east and west, and is about 14 inches wide, full of clay and spar, and nice lumps of ore. We may look daily for an improvement here. In the 85 yard level, south-west at the forebreast, the vein is very large and promising. We are cutting 4 feet wide along the vein, and for the last 3 yards driving have not seen either wall: it is full of spar and nice lumps of ore. I expect every day here to drop on a good bunch of ore.—Milver Yelin, at Brynford: The forebreast of the 94 yard level is very hard and poor for ore, so we have put the men to sink below the level, just on the spot where we had a bunch of ore a few days since, which has gone down, and which we shall now follow below the 94.

The air is bad in this pitch.—Western Sett: In the 10, east of new shaft, the lode in No. 1 chifon is 2 feet wide, producing some good stones of ore—very promising. In the 65 chifon, sinking west, the lode is 2½ feet wide, but poor. In the 50 fm. level, east of Price's shaft, the lode in the end, driving west, is 3 ft. wide, producing a small quantity of ore—very promising. In the 50, No. chifon, sinking west, the lode is still very promising, but less profitable as yet. In the 40, west of Price's shaft, the lode in this chifon is much the same as when last reported. In the 40 fm. level winze, spoken of in our last remarks, we have commenced to sink at the bottom; the lode is 1½ ft. wide, but little has been done in the stopes over the 40, the men having been employed in picking over the ore stuff accumulated at the bottom, trammeling and throwing down stuff from the upper levels, building walls, &c. We have now resumed stowing by 12 men; tide yielding about 1 ton per cubic fathom. On Saturday we shall sample a parcel of ore, compute 50 tons, for sale on the 15th.

NEW GROUND.—The lode in this chifon is 2 ft. wide, containing a little ore, but not to value.—Western Sett: In the 10, east of new shaft, the lode in No. 1 chifon is much the same as when last reported; we shall now commence to sink west in order to make a foot communication with the 30 fm. level, end driving, east. In the 10 fm. level back stopes we have not been working since our last report. In the 30, new shaft, end, driving east, the lode is still poor. In the 30 end, driving west, the lode is still producing some good stones of ore. There is no change in No. 2 chifon since our last report. In the western new ground the lode in the chifon is still poor.—Account of Ground Sunk in Nov., 1863: Eastern new ground sunk, by two men, 5½ yards, at \$12 per yard; the chifon west of new shaft, by three men, 9 yards, at \$9 per yard. The number of men employed in Nov., 1863, was—Englishmen, 10; natives, 67; total, 67.—Remarks: We shall commence to sink the new shaft below the 30 fm. level on the 19th of this month.

MARIQUITA AND NEW GRANADA.—Dec. 4: Santa Ana: Cost for Sept., \$14,720; return, \$17,816. The 110 and north lode is about 5 ft. wide; there is no change to notice since my last. The stopes in the bottom of the 110, north of the winze, the lode is about 7½ feet wide, and very rich throughout, producing rich dry dry stamps mineral; the ground is very hard in these stopes. They are set at \$75 per fm. In the stopes in the bottom of the 110, south of the winze, the lode is about 11 feet wide, producing rich dry dry stamps mineral; it is divided by a horse of killas, and its character and quality are the same as last reported—set at \$65 per fathom. In the stopes in back of the 110, north of the winze, the lode is about 6½ ft. wide, producing rich dry dry stamps mineral; about 6 tons per fathom. In the stopes in back of the 100, south of the flookan, the lode is about 2 feet wide, producing small branches of dry dry stamps mineral; it is suspended for the present. In the stopes in back of the 100, north of the flookan, the lode is about 2 feet wide, producing good wet stamp mineral, and also a little dry stamp mineral; it is suspended for the present. In the stopes in back of the 100, last month, the ground is hard for sinking. It is now 10 ft. below the 100, and the lode is in the back of the 110, south of the winze, the lode is about 11 feet wide, producing rich dry dry stamps mineral; it is divided by a horse of killas, and its character and quality are the same as last reported—set at \$65 per fathom. In the stopes in back of the 110, north of the winze, the lode is about 6½ ft. wide, producing rich dry dry stamps mineral; about 6 tons per fathom. In the stopes in back of the 100, south of the flookan, the lode is about 2 feet wide, producing good wet stamp mineral, and also a little dry stamp mineral; it is suspended for the present. In the stopes in back of the 100, last month, the ground is hard for sinking. 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EAST WHEAL LOVELL (*Special Report*, by Capt. Charles Thomas, of the Dolcoath Mines), Jan. 22: I have to-day inspected this mine, and the following is my report thereon:—Two lodes are being worked, 7 fms. asunder, each underlying north about 18 in. in a fathom.—South Lode: The engine-shaft is sunk perpendicularly from surface 17 fms.; by sinking it 4 or 5 fms. deeper it would fall in with the lode. Peter's shaft, 7 fms. west of the engine-shaft, is sunk perpendicularly from the surface 20 fms.; this shaft would also fall in with the lode by being sunk about 6 fms. deeper. The 20 fm. level is driven west from the shaft nearly 10 fms.; the first 4 fms. of but little value; the next 4 fms. in rich tin, worth, I think, from 24/- to 40/- per fathom, average about 35/-; the last 2 fms., about a small cross-course, not of value. In the end the lode, though small, contains some very good tin, indicating a greater improvement shortly. No ground has been stopped on this lode, the back and bottom standing entire.—North lode, reached by a cross-cut at the 17 fm. level from the engine-shaft, drained by a chain through that level sunk 9 fms., and at that depth explored west 7 fms., where a diagonal shaft, dipping west at an angle of 45°, is sunk 7 fms. deeper still. The back of this 26 fm. level is stoned 6 fms. in length, which yielded tin of the value of from 40/- to 60/- per fm. Having given the above general description of the workings, I proceed to report on the present operations:—On the north lode, the diagonal shaft, below the 26 fm. level, is being formed into order for sinking henceforth on the regular course of the lode without dipping west. The lode here is about 8 ft. wide, worth I think, fully 50/- per fathom, or, for the length of the shaft (12 ft.), 100/- per fathom in depth, working by 10 men. The 20 fm. level is driving west, by eight men, at 7/- per fathom. The lode in the end is 4½ ft. wide, worth, I think, about 60/- per fathom; the full width of the lode not ascertained; no north wall reached near the end. The back of the 20 fm. level is stoned by four men, at 45/- fm., per fathom; 4 fms. behind the end, where the lode is 3 ft. wide, worth about 40/- per fathom. The bottom of the 20 fm. level, behind the end, is stoned by two men. The lode at this point is yielding some good tin, and will, doubtless, yield an increased quantity further west, on approaching the end of the 20 fm. level. Hitherto the north lode, as reported above, has been drained by chains passing through the 17 cross-cut, and the shaft below the 26 has been fast dipping westward, which mode of working, though irregular for an established mine, is quite justifiable by way of searching for the best spot to sink an engine-shaft on this lode. I fully agree with your agent that the best plan for present working is that of enlarging an old shaft, sunk 14 fms., by the ancient timmers, and stopping the lode from the 14 to the 26 fm. level, preparatory to sinking the engine-shaft continuously on the course of the lode, just where the diagonal shaft is being enlarged. All this is being done, as reported above, and it is exceedingly fortunate that all the ground now stopping for this purpose is rich for tin. The eastern flat-roof shaft, 21 fms. east from the engine-shaft, is sunk near the north lode 8 fms. below the 14 fm. level, suspended for the purpose of making the main workings in the western rich ground. When the engine-shaft there is got into full course of working, a few months hence, the eastern ground will be explored, by driving east at the 26 fm. level, with good prospects of success, arising from the facts of the old timmers having worked that part deeper than any other, some tin of value having been found where the lode was cut into at the bottom of this eastern shaft, and of tin of value going east from the present western workings. In concluding my report, I would make the following summary:—1. The mine, though worked rather extensively to the depth of 14 to 18 fms., from surface time out of mind, is still quite in its infancy for modern mining.—2. The success of working about 16 fms. deeper, and some 14 or 15 fms. in length at the greatest, has been very great, not only in the amount already realised by sales of tin, but also in the quantity of the already explored for stopping at will.—3. There are three main points of importance to be worked for proving more extensively the value of this mining property: the sinking of the shaft in a course of tin, worth 100/- per fm. for 12 ft. in length; the driving the 20 fm. level further west in whole ground, worth 60/- per fm.; and in a few months the driving the 26 east under the whole workings. All the conditions—the character of the granite, the form of the surface, and the fact of two lodes being found so near together—are of a favourable kind for this district, which has often in some of the lodes been changeable in value, even when profitably worked under judicious management. I have pleasure in reporting that no ground is being worked in this mine before it is properly drained and ventilated, and that the parts are working which can realise the best results to the adventurers. The steam-engine at work is of power enough to sink to a great depth. The quantity of water is so small that it is of comparatively little importance whether it is pumped direct or by flat-rods. I am also pleased to have to report that the mine is showing indications of more permanency, and more tin is now being explored than at my visit to the mine on Dec. 12 last.

EAST WHEAL LOVELL.—J. Burges, Feb. 4: The shaft is sinking below the 26, by ten men; lode quite 8 ft. wide, worth 100/- per fm. The 20 end, on the north lode, fully maintains its value, worth 70/- per fm.; driving by eight men. The stopes are worked by six men, and worth on an average 50/- per fm. The south lode is as last reported. On Friday we shall act a new cross-cut to drive south to intersect another lode.—**EAST WHEAL RUSSELL**.—J. Goldsworthy, Jan. 30: The lode in the 120 east has improved, and produces ½ ton of copper ore, or worth 3/- per fathom; the lode is looking more promising. No other change.—J. Goldsworthy, Feb. 3: *Telegram*: In the 120 the lode is worth 5/- per fm.

—John Goldsworthy, Feb. 3: Homersham's Shaft: The ground in the 130 fm. level cross-cut is favourable, and good progress is being made; by present appearance the south lode is close ahead. In the 120, west of Maynard's cross-cut, the part of lode being carried is 4 ft. wide, composed of capel, quartz, iron, and spotted with black oxide of copper ore—a promising lode. In the 120, west of Vigor's cross-cut, on the main part of the lode, the lode is 3 ft. wide, producing a little copper ore, but not sufficient of the latter to value. In the 120, east of Vigor's cross-cut, the lode is 4½ ft. wide, composed of capel, peach, mundic, flockan, &c., and produces 1 ton, or worth 5/- per fm. The ground in Hooper's cross-cut, driving south from the top of Hooper's rise, is favourable for progress. In the 45 east the lode is 3 ft. wide, composed of peach, quartz, mundic, &c., unproductive. The lode in Harvey's rise in back of the 45, so far as cut into, is composed of capel, quartz, peach, mundic, &c., with spots of copper ore. In the 85 fm. level, west of Hitchins's engine-shaft, the ground in Williams's cross-cut driving north has become harder, which renders the progress slow at present.

—J. Richards, Feb. 4: Homersham's Shaft: In the 130 cross-cut north the south part of the lode is intersected and cut through. It is 18 inches wide, composed of quartz, mundic, and flockan. The driving will now be turned east on the course thereof, and no time will be lost in getting east towards the ore ground. In the 120, west of Maynard's cross-cut, the lode is 4 feet wide, and yields a little black oxide of copper. In the 120 east, west of Vigor's cross-cut, on the main part of the lode, the lode is 3 feet wide, composed of quartz, mundic, and stones of rich ore. In the 120 east, and east of Vigor's cross-cut, the lode is large, 4½ ft. wide, and maintains its kindly appearance—quartz, peach, prian, mundic, and ore, worth 1 ton, or 6/- per fathom. In Hooper's cross-cut south, from the top of Hooper's rise in the back of the 85, west of Molland's cross-cut, on the north part of the lode, the ground is favourable for progress. In the 45 east the lode is 3 feet wide, composed of mundic, peach, and quartz. In Harvey's rise, in back of the 45 east, the lode so far as cut into (5 fms.) is composed of quartz, peach, and ore, worth the latter 20/- per fathom. We have just commenced a rise above the back of this level, to communicate with the winze below the bottom of the 45 east, where the lode, when we last reported it, was worth 15/- per fathom, but is now suspended, in consequence of water. In the 41 east the lode is about 2 feet wide, composed of peach, quartz, mundic, and good stones of ore. In the 39 east we have no particular change to mention, the lode being still split into branches. The tribute department continues to yield much the same as usual. In the new eastern shaft, sinking per fathom, the ground is still of the same mineralised character as it has been for some time past. The 60 cross-cut north is progressing satisfactorily. We weighed off on the 29th Jan. 94 tons 25 cwts. of ore.

—LADY BERTHA.—Capt. Harpur and Methereil, Feb. 4: The lode in the 53 fathom level is about 1 foot wide, composed of peach, mundic, quartz, and black and yellow copper ore; a very kindly lode, worth quite 5/- per fm. This, if it should continue, is of no small importance, as the shoot of ore appears to be dipping east towards the new eastern shaft. The lode in the 53 west is from 3 to 4 feet wide, composed of quartz, mundic, peach, and ore, worth of the latter 20/- per fathom. We have just commenced a rise above the back of this level, to communicate with the winze below the bottom of the 45 west, where the lode, when we last reported it, was worth 15/- per fathom, but is now suspended, in consequence of water. In the 41 east the lode is about 2 feet wide, composed of peach, quartz, mundic, and good stones of ore. In the 39 east we have no particular change to mention, the lode being still split into branches. The tribute department continues to yield much the same as usual. In the new eastern shaft, sinking per fathom, the ground is still of the same mineralised character as it has been for some time past. The 60 cross-cut north is progressing satisfactorily. We weighed off on the 29th Jan. 94 tons 25 cwts. of ore.

—LLANFAIR GREEN AND BLUE SLATE QUARRIES.—The following report on the progress of these quarries has been received:—No. 1 level has been driven 74 yards into the hill, and for the last 25 yards the driving has been in the blue vein, which will be passed through in about 15 yards additional driving. When thoroughly intersected a level will be driven at right angles to the present on the back of the vein under the clay slant towards Caergethin Quarry, and chambers opened out, and slate bargains commenced. The slate-rock in this level is of excellent colour and quality, and splits well. No. 2 level is driven above No. 1, and is 74 or 75 yards long; this level has passed through the slate vein being nearer the top of the hill. An opening has been made from this level to the surface, and a rise will also be commenced from No. 1 to No. 2 as soon as the clay slant is reached, which will facilitate the working up to the surface, and thoroughly ventilate the quarry. No. 3 level has been driven 55 yards, at a distance of 100 yards north of Nos. 1 and 2 levels, and has passed through the blue vein, which is 40 yards wide. From the end of this level a level is now being driven on the back of the vein towards the levels Nos. 1 and 2. This level will be open to surface, and the slate worked in open galleries, to facilitate which the top rock has been entirely cleared for a space of from 20 to 30 yards square. From this top rock many thousand slates have already been made, and as soon as the roofing up is completed from the level below slate bargains will also be commenced here. The level is now being driven under the clay slant through slate rock of excellent quality. Another level has also been commenced under No. 3. The levels, Nos. 1, 2, and 3, can all be extended to intersect the large green vein, the topmost vein of the series, which is upwards of 60 yards thick. In the meantime a trial shaft is being sunk into the centre of that vein. The rock proves large, and the back and foot-joints unusually good, and although the shaft is at present only 5 or 6 yards deep from the crest of the hill, slates of excellent colour and quality have already been made from it. Several cargoes of iron and sleepers for the Welsh Coast Railway have lately been landed at the wharf Pen-y-sarn, only half a mile distant from the quarry, where the slates can be shipped at all times, and the railway, which will pass between the wharf and the quarry, will facilitate transit to all parts of the kingdom.

—GARREG.—W. Sandoe, Feb. 3: I have just come up from underground here, and am pleased to find the lode looking better in the winze sinking below the 29; the lode is 2 ft. wide, carrying a solid rib of ore, in places 6 in. wide, and from its kindly appearance I expect it will improve. There is no change in any other point since last week.

—GAWTON.—G. Rowe, Jan. 30: The sinking of the new engine-shaft is progressing as fast as the nature of the work will admit; the ground is moderately easy, and of a good description for the production of mineral. The lode in Nos. 1 and 2 stopes, in back of the 56 west, continues to look well, and yielding the usual quantity of ore. We sampled on Monday last (computed) 72 tons of ore, being the produce of present month.

—GREAT BRIGAN.—J. Tredinnick, Jan. 30: Highburrow shaft is in full course of sinking, and is to be carried 12 ft. long; the price for sinking is 20/- per fm.; the lode in the shaft is split into branches, and disordered by a large floor of spar, which crossed the shaft at this depth. The branches produce a little copper ore, but nothing to value. It is my opinion these branches will come together in sinking, and form the lode regular and more productive for copper ore. I shall put a pair of men to cut the plat larger, and then drive the 45 west on the course of the lode; the lode in this end is 2 ft. wide, yielding a little ore. The water has been very high in the adit this week. We were obliged to stop the engine and put in timber and turf by the side of Highburrow shaft, to prevent its running over on the men.

—GREAT NORTH DOWNS.—J. W. Crase, Jan. 30: The men are making fair progress in sinking Vivian's engine-shaft below the 57. The lode in the bottom is 4 ft. wide, kindly in appearance, and yielding saving work for copper ore. The 57, driving west from engine-shaft, is communicated to No. 2 winze. The lode in the 57, driving east of Jenkins's shaft, is 3 ft. wide, worth 8/- per fathom. The ground in the 57 cross-cut, south from engine-shaft, is favourable for driving. We intend to commence sinking River shaft below the 60 fm. level next week. The tinstuff sold on Thursday last realised 184/- 19s. 5d.

—GREAT RETTALLACK.—W. H. Reynolds, Feb. 3: In the adit end we have branches of spar, with blonde and mundic, and we expect soon to cut a lode.

—GREAT SOUTH TOLGUS.—J. Daw, Feb. 3: In the 166, east of Lyle's shaft, the lode is 1 ft. wide, composed of spar, jack, and stones of copper ore. In the 154 east the lode is worth 30/- per fm. for tin. In the 154 east the lode is 1 ft. wide, unproductive. In the 140 east the lode is 1½ ft. wide, producing 3 tons of copper ore per fm. In the 125 west the lode is 1 ft. wide, producing 1 ton of ore per fm.—North Lode: In the 90 east the lode is 1 ft. wide, worth 5/- per fm. for copper ore. The lode in the winze sinking below this level is 2½ ft. wide, producing 3 tons of ore per fm.

—GREAT WHEAL BUSY.—John Edwards, J. Petherick, W. Trelease, Jan. 30: At Harvey's engine-shaft, sinking below the 130, the lode is 2½ ft. wide, and worth for the copper ore from 20/- to 25/- per fm. The lode at Offord's shaft, sinking below the 130, is 3½ ft. wide, worth 25/- per fm. for tin and copper ore. The lode in the 130, driving east of said shaft, is 5 ft. wide, and worth for tin and copper ore 30/- per fm. The lode in No. 1 stope in back of the 130, east of Harvey's, is 4 ft. wide, and worth for copper ore 30/- per fm. The lode in No. 2 stope, east of ditto, is 3 ft. wide, and worth for copper ore 20/- per fm. The lode in No. 1 stope in back of the 130, east of Offord's shaft, is 3½ ft. wide, and worth 20/- per fm. In No. 2 stope, east of ditto, the lode in No. 1 winze, sinking below the 120, east of Offord's, is 4½ ft. wide, and worth 40/- per fm. for copper and tin. The 110 fm. level endmen are engaged in fixing skip-end work from the 100 to the 110 at Matthews's shaft. The lode in the 70, east of said shaft, is 6 ft. wide, producing stamping work for tin.

—GRIT AND STAPELEY.—Jan. 30: All the works connected with these mines are going on regularly. The 166 fm. level cross-cut is now extended north from the East Grit steam-engine shaft towards the south lode 3 fms. 2 ft.; the cross-cut at present is in very hard ground, containing some small branches of spar; it looks as if we are near the south part of the lode; we hope that about a week or nine days more will bring us into the ore-bearing part of the lode, which stands pretty much to the north in the levels above; as soon as the lode is cut and drained from water to the 106 fm. level, we shall commence at once to sink a winze or two below the 90 fm. level, so as to lay open that piece of ground between the 90 and 106 fm. levels, for taking away as soon as possible. The 90 fm. level, west from East Grit engine-shaft, is in a lode about 2 ft. wide, principally composed of spar, and producing stones of lead ore, but not sufficient to value; the level at present is in a hard channel of ground, which makes our progress rather slow at present for driving. The 90 fm. level, going north on the cross-course, is in a lode about 6 ft. wide, composed of grit and spar, and showing spots of blende and lead ore; the ground is rather stiff at present for driving. There has been nothing done in the 70 fm. level, south on the cross-course, since last reported. We have there a pair of men employed at present in cutting a good plat at the 106 fm. level; we want that plat cut to a good size, so that we may lose no time, when the lode is cut, in sending away the stuff to surface; as soon as they have completed that job we shall resume the driving of the 70 fm. level, south on the cross-course, again. The Dingle shaft is sunk to

the required depth for the 60 fm. level; we have made good progress in sinking this shaft from the 59 to the 60, which has occupied about nine weeks. We have commenced the cross-cut at the bottom of the shaft, towards the 60 fm. level, and we calculate to have about 3 fms. to drive to reach that level; this we hope to accomplish in about three weeks' time. The 50 fm. level, south from the Dingle shaft, on the Silver lode, is in a lode about 3 ft. wide, composed of clay-slate, spar, and producing good stones of lead ore; this is the most promising level that we have in the mine at present, the lode looks kindly, and is going south all in virgin ground, where we hope to find some good deposits of ore; we have six men in this level. The lode in the 80 fm. level, east of the 70 fm. level, south from the engine-shaft, on the Ridden lode, is about 6 ft. wide, composed of clay-slate and spots of blende; ground hard for driving. The lode in the Stapeley deep adit level is about 4 ft. wide, principally composed of spar, and letting out a little more water than usual.

—GYRRILLS WHEAL FLORENCE (Marazion).—E. Rogers, Feb. 2: Standard Lode: The deep adit level, east of the north winze, which is 40 fms. from surface, is communicated to Wheal Gyrrills; the lode in the back is nearly all taken away from shaft to the east boundary, but in the bottom of this level, for about 15 fms. in length, the lode is worth 18/- per fm., and when this ground is laid open can be stopped at 4/- per fm.; in this level we have set a cross-cut to drive north at 4/- per fm.; stoned 4 fms.; we expect in a short time to intersect Fisher's lode. In the 30 and 19 fm. levels east of the shaft is nearly all taken away, and in those levels west the lode is in a disordered state, and unproductive.—Hoskington's Lode: In the deep adit end, east of the south winze-shaft, the lode is 3 feet wide, composed of spar, killas, mundic, and stones of copper ore; this level is gone through about 6 or 7 fms. of profitable ground, but the lodes at the present time are not so rich as they have been. The level at this point appears to have passed over the top part of a bunch of copper ore. With regard to future prospects, I should say the engine-shaft must be sunk, levels driven, and ground opened by winzes under adit, before any profits can be made; the lode left standing above the adit level is mostly worked away, but a certain part of it will be taken away by tributaries so soon as you get the stamps in working order, as the returning charges will not be so high as they are now, by selling it in the stone. In viewing the favourable character of the ground, and the congenial appearance of the different lodes in and adjoining this property, I have no doubt but a small outlay will place this mine in the Dividend List.

—GWYDYN PARK.—W. Smyth, Feb. 4: The stopes in the back of the adit level still yield 6 cwt. of lead ore per fathom. The lode in the deep adit, or shallow lode, is 3 feet wide, producing good stones of lead ore. In the Gwydlyn deep adit, driving east on the east and west lode, the lode is 8 to 10 inches wide, composed of spar, mundic, blende, and lead ore, looking very kindly, and letting out water. The end on gossan lode north is looking very kindly, with faces of lead ore. The dressing is going on as usual.

—HARWOOD.—J. Race, Jan. 29: We are at present engaged rising up into the limestone in the new vein, and I hope to reach it next week, if all goes well. We have had an improvement in No. 1 vein east this week. The drift at the top of the limestone is worth 1½ ton of ore per fm.; there is ore quite up to the plate, and good ore going down in the sole. We cannot afford to hold to the shaft, when we shall get good air. The back stopes are as last reported, worth 1½ ton of ore per fm. The trough level is rather shallow.

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produce 6 tons of ore per fathom. There is no alteration in any other part of the mine since our last report.

REDMOOR.—T. Taylor, Feb. 4: We have cut a deal of water in our cross-cut adit, towards Florence lode; the ground is very soft, being flockan, mixed with prian and soft clay-slate. We are obliged to close timber the level. No particular alteration in the tributary ground.

ROARING WATER.—Capt. Thomas, Feb. 1: I am happy to be able to inform you that a strong and powerful lode has made its appearance in Gillman's shaft, from the north; as far as we can judge it is 2 feet wide, composed of soft spar, gossan, and rich black and yellow ore—one of the best-looking lodes I have seen. The shaft on Grady's lode is now down 15 fathoms from the surface, and I would recommend to put out a cross-cut at near the bottom of the shaft to cut the new lode; I expect to have only about 4 fms. to drive. Other parts of the mine the same as last week.

ROSECLIFFE.—J. Phillips, Feb. 2: In order to get through the run in the adit level we consider it advisable, after trying our best, and thus far having failed to do it, to drive a side level, which was commenced yesterday, so that now we hope to succeed in getting through without any more difficulty.

ROSEWARNE CONSOLS.—T. Uren, J. Berryman, Feb. 3: In the 70, east of Ellen's shaft, the lode has further improved; now worth 10d. per fathom. In the 50, east of No. 2 cross-course, the lode is worth 7d. per fathom. No other change to notice since last week.

ROSEWARNE UNITED.—T. Richards, E. Cartwheel, Feb. 4: Glesier's engine-shaft is sunk 5½ fathoms below the 30. The lode in the 30, east of the engine-shaft, is at present unproductive. The lode in the 20, west of the engine-shaft, contains stones of mastic and copper ore. The lode in the 20, east of the engine-shaft, is 10 in. wide, composed of quartz and chlorite, of a promising appearance. The lode in the rise in back of the 20, west of the engine-shaft, is worth for copper ore 10d. per fathom. The stops in the back of the 20, east and west of No. 2 winze, are worth 9d. per fathom for copper ore.

SILVER MOUNTAIN.—M. Francis, Feb. 4: We thought we should be able to cut through the lode in the 10 by hand labour, but the water is too much, and we must put down the plank, and attach the water-wheel to it. We are raising ore principally from the back of the 5 west, which turns out well. The cross-cut south has passed through a large lode, but it is not productive in this place; we intend to open upon it, it may probably yield ore. There is a little ore in the western cross-cut, and some good ore in driving the adit west of the Blue shaft. The engine and machinery work well, and the dressing is going on favourably.

SILVER VEIN.—E. Burn, Feb. 4: The summen have completed the plat at the 50, and will commence putting in penthouse at once, in order to commence sinking the engine-shaft by Monday next. The lode in the 50 north is producing good stones of ore. We have a large stream of water coming through the lode, which is a favourable indication of a large lode before us. We have driven about 9 feet in the cross-cut through the lode at the 40; the main part cut through is 4 feet wide, composed of soft white quartz, and will produce 5 cwt. of falber per fm. I am not satisfied that we are through all the lode yet, therefore we shall drive a few feet further west to prove it. The lode in the 30 is 3 feet wide; a very kindly lode, but at present poor. We have a few feet more to drive to reach the new winze-shaft. No particular change to notice in the tribute and pitches. The increase of water at the 50 causes our engine to work ten strokes per minute.

BORTRIDGE CONSOLS.—J. Richards, Feb. 4: In the 62 cross-cut north, but little has been done, owing to the water being in; the ground continues favourable. In the 50 west, and west of the ventilating shaft, a cross-course has been intersected, to the west of which the lode is not yet met with. In the 50, east of Stanton's cross-cut, on No. 1 tin lode, the lode is from 2 to 3 ft. wide, and yields good work for tin ore. In Howe's rise, in the back of the 50, east of Stanton's cross-cut, on No. 1 tin lode, no lode has been taken down, the rise being carried up by the side thereof. In the 50, west of Stanton's cross-cut, on No. 1 tin lode, the lode is 2 ft. wide, and yields stones of both tin and copper ores of good quality. In the 40, east of Gilbert's cross-cut, on No. 1 tin lode, the lode is small, 8 in. wide, composed chiefly of capel and quartz. In Gilbert's cross-cut north, at the 40 fm. level east, the ground continues favourable, and good progress is being made.

SOUTH BULLER.—J. Hosking, Jan. 30: Hodge's shaft, sinking below the 50, continues hard and most difficult for sinking. There is no appearance of the north lode in the shaft as yet. The south or engine lode continues its regular underlie; it is now about 10 in. wide, composed of quartz, mastic, and a little copper. The ground in the 40, driving west of Hodge's shaft, is not so hard towards the south, consequently a little more progress will be made in driving; the lode is split into two branches; the north part, about 4 inches wide, is composed of quartz, mastic, and copper; the south part is the same size, and produces occasional stones of good yellow copper ore.

SOUTH CRENVER.—E. Chegwin, Feb. 2: In the flat-rod shaft, sinking below the 12, the lode is 2½ ft. wide, producing 1½ ton of copper ore, worth about 8d. per fm. In the 12, driving west of flat-rod shaft, the lode is 2 ft. wide, producing 1½ ton of copper ore, worth about 7d. 10s. per fm. In the 105, driving east of flat-rod shaft, the lode is 3 ft. wide, producing 1 ton of copper ore, worth about 7d. per fm.

SOUTH DARREN.—J. Boundy, Feb. 2: Saturday last being our pay and setting-day, the following bargains were let:—To sink a winze below the 60 east by four men, at 6d. 10s. per fm. I hope to communicate this winze to the 70 by the end of the present month. The 40 to drive west by six men, at 7d. per fm.; the lode at this point is much of the same character as last reported; there is a large quantity of water coming from the end, which looks favourable. The 30 to drive west by six men, at 7d. per fm.; here we have passed through a piece of broken up ground, which for the present has disordered the lode; the lode in the end presents every indication of an early improvement. To stop the back over the 30 west from the winze by six men, at 7d. per fm.; the lode is 4 ft. wide, worth from 40d. to 47d. per fm. for lead and copper ore. To stop the back over the 30 east from the winze by four men, at 5s., per fm.; the lode is 2 ft. wide, worth for lead ½ ton, and copper 1 ton per fm. To stop the back, east of ditto, by four men, at 7d. per fm.; the lode is 2 ft. wide, worth for lead 6 cwt., and copper 12 cwt. per fm.; at present we are only taking away about one-half of the stuff broken from the stopes, the remainder allowed to remain on the stull, to enable the men to reach the back. To sink a winze below this level by six men, at 8d. per fm.; here we are sinking on the south wall of the lode in consequence of the water; the lode at this point looks well as we go down. The 20 to drive west by four men, at 6d. The lode and stratum in this end are very congenial for lead, I am, therefore, looking for an early improvement. The shallow adit to drive west by four men, at 6d. per fm.; the lode is 15 in. wide, of a very promising appearance, composed of good clay-slate, carbonate of lime, and letting out much water; this at present is a promising end, but not one enough to value. We have now completed the air-shaft to the 50, and have commenced to clear out the stuff from the end, and I hope to commence driving in the course of a few days. We sampled out 10 tons of silver-lead ore, and on Thursday next we shall sample about 18 tons of good copper ore. The machinery is in good working order, and everything is being pushed on as fast as possible.

SOUTH DOLCOATH.—Wm. Roberts, Feb. 3: In the 70 cross-cut north the ground continues favourable for driving. In the 50 east, on the counter, the lode is about 1 ft. wide, producing occasional stones of ore. In the same level west the lode is headed by the cross-course. In the 21 east the lode at present is small. In the 24 cross-cut, driving north, west of flat-rod shaft, no lode or branch has been intersected. We have four pitches working by four men, at 5s. in 11; two men at 12s.; two men at 13s. 4d.; and two men, at 13s. 4d. in 11.

SOUTH FOXDALE.—M. Gross, Jan. 30: The appearances in the bottom end are much of the same character as last reported—if, anything, the lode is larger, and showing stronger indication of becoming valuable productive, and doubtless will confirm my opinion, so often expressed, that it could soon fail to produce large quantities of mineral at a greater depth, and particularly when it intersects the great east and west lode, which is about 15 fms. in advance of the present forebay. I cannot see much alteration in the slope; it is producing a fair quantity of ore, but it is not regular. The lode in the winze is of an unusual size, and is looking strong and promising, at the same time it appears much disturbed; it yields good stones of lead and blende, with every other kindly indication, and I hope to be able to report more favourably on this in a short time. The dressing operations are progressing as favourably as can be expected.

SOUTH GRYLLS.—J. Richards, Feb. 1: The cross-cut south to the new lode is extended towards it 17 fms.; the ground throughout has been exceedingly favourable for the production of mineral, and the present end is composed of killas, with floors of spar, intermixed with mastic and greenish or tinture, which are good indications of nearing the lode, and I hope soon to be able to report a good discovery here. The masons have almost completed the roofing of the buildings. The slate is on the office, store rooms, and smiths' shop, and are putting them on the carpenter's shop and saw-house, which will be completed by the end of this week.

SOUTH WHEAL GREENVILLE.—G. R. Odgers, Wm. Bennetts, Jan. 30: We have to-day set the adit to drive west, by six men, at 2L 5s. per fathom; lode 18 in. wide, of quartz, prian, peach, and gossan, yielding a little tin, although not enough to value, yet a kindly lode, and the ground by the side looks very promising.

ST. DAVID'S (Gold).—Thomas Faull, Feb. 4: We have intersected a branch in the deep adit, supposed to be part of a lode; said branch is from 9 in. to 1 ft. wide, composed of copper, lead, blende, and sulphur. A sample washed yesterday shows traces of gold. This augurs well in favour of the main lode, which is still ahead of us. The ground continues soft for driving, and the men are making good progress. I scarcely ever saw such alterations in so short a time. Since cutting the branch above-mentioned the ground has been mineralised throughout, and its auriferous character all that can be desired. I expect we shall cut the main part of the lode in the course of a few days, when you shall be advised immediately.

ST. IVES WHEAL ALLEN.—J. Nancarrow, J. Bryant, Feb. 4: The lode in the 10 west looks promising, and yields a little tin. The lode in the 10 east is small, there is nothing to value. The 20 west is improving, worth 3d. per fm.; stops in back worth 4d. per fm. The 20 east is for the present unproductive. The 20 north is worth 4d. per fathom. The 40 east has not yet reached the tin ground. Glesier's Carbonate at the 20 east, is worth 12s. per fm. Charles Frederic's stopes are worth 4d. per fathom. Richards's shaft is down to the 12; the men are engaged casting and dividing the shaft, will next week commence driving east and west.

ST. JUST CONSOLS.—Wm. Williams, Feb. 2: We sold another parcel of tin on Jan. 30 last 16 cwt., 0 qrs., 23 lbs. of black tin, amounting to 57L 10s. 6d.; the cheque for the same I forwarded to the office in due course. Saturday last was our pay and setting-day, and everything passed off well. The tinstuff in the Guide lode is improved in quality; if this continues I have no doubt we shall be able to sell tin enough next time to meet the cost, especially if we get the new eight heads of stamps to work on Saturday next, which I expect to do. From all appearances the mine will do well.

ST. JUST UNITED.—John Cartwheel, Feb. 3: The Red Dipper shaft, being situated 10 west looks promising, and yields a little tin. The lode in the 10 east is small, there is nothing to value. The 20 west is improving, worth 3d. per fm.; stops in back worth 4d. per fm. The 20 east is for the present unproductive. The 20 north is worth 4d. per fathom. The 40 east has not yet reached the tin ground. Glesier's Carbonate at the 20 east, is worth 12s. per fm. Charles Frederic's stopes are worth 4d. per fathom. Richards's shaft is down to the 12; the men are engaged casting and dividing the shaft, will next week commence driving east and west.

ST. IVES WHEAL ALLLEN.—J. Nancarrow, J. Bryant, Feb. 4: The lode in the 10 west looks promising, and yields a little tin. We have 12 men cutting tram-plats in the 40 and 62, and hope soon to be extending the 62 on Wheal Owl and Wheal Dower lodes, further on Wheal Whidden, which crosses the Wheal Dower to the east of this shaft. From these lodes I expect, most confidently, considerable returns of tin, in the 20 we have a long run of good paying tin ground in the back and bottom. We are now extending this level east; lode 18 in. wide, good. We have also six men stopping tin ground in the back, and intend the next setting to employ at least 10 here. In the 40 end east we have a good course of tin 18 in. wide, and intend to put six men in this end and back at our setting on Saturday next. On Wheal Owl lode we expect to hole the 40 to the Red Dipper shaft this week, so that by Saturday we may be able to set at least three new pitches here. On this lode north, from the West Buck shaft, in the deep adit level, I am pleased to report a good lode, 2 ft. wide; this level is 48 fms. from surface, and no level over or under it. To the south we are now sinking a winze below the adit, and rising against it from the back of the 20. When this winze is through, which I hope to have done by the end of the month, I shall rise over the adit, and extend a 10 fm. level, as also bring on the 20, 40, and 62. In this part of the mine above we have immense quantities of good tin ground. The lode in the winze sinking below the 40, west of the engine-shaft, on the north lode, is looking well. Other parts of the mine just as last reported. We got eight more tin dressing-frames to work this week, and hope next week to get another round baffle at work. We shall require 20 more men underground on setting-day, and 20 which we have hitherto employed on unproductive work will be transferred to breaking tin ground. I think this looks well.

TIN HILL.—Capt. Martyn, Feb. 3: Since my last we have broken some capital stones of tin from the south lode. When we have completed the shaft we are now sinking, we shall be able to set more pitches on this lode. We are good sinking work for tin. We are getting on with the floors as fast as possible. The tributaries' pitches are all looking well, and everything is progressing satisfactorily.

TOLCARNE.—Feb. 3: Field's Lode: At the shaft sinking below the 50 the lode has not been taken down. In the 50 east the lode is large and kindly, 3 ft. wide, with good stones of copper ore. In the 40 east the lode is 2 ft. wide, yielding 1 ton of ore per fm. The 29 east is unproductive. The rise above the 10, saving work for ore.—New North Lode: The 40, east and west, are each yielding 1 ton of ore per fm. The 30 east is producing 1 ton of ore per fm. The winze below the 30, west of cross-cut, is yielding 4 tons of ore per fm.—King's Lode: At the shaft below the 12 the lode is 2 ft. wide, producing stones of ore. In the 12 west the lode is 20 in. wide, composed of gossan and spar. In the adit cross-cut south the ground is very much better—a pretty killas, with a good deal of water, and we are probably near a lode. The pitches are producing the usual quantity of ore.

TRELOWETH.—T. Richards, Feb. 4: In the engine-shaft, sinking below the 154 fm. level, there are stones of ore in the lode. The lode in the 154 end, driving east, has not been taken down since my last. The 141 end, east of engine-shaft, is not altered. The sump-winze, sinking below the 144 (or 9 ft. long) is worth 25d. per fathom. The 144 end, west of sump-winze, is worth 16s. per fathom. The lode in the 134 end, east of sump-winze, is worth 10d. per fathom, but it looks likely to improve. The 124 end, east of sump-winze, is spotted with copper ore. The 134 end, west of engine-shaft, is worth 5d. per fathom. No other alteration in the mine.

TRENCROM.—William Arthur, Feb. 4: The lode in the 110, east of Gleaser's engine-shaft, is 10 in. wide, saving work for tin, with improved appearance. The lode in the 100, east of Hollow's shaft, is 16 in. wide, worth 7d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 6s. per fm. The lode in the 80, east of Hollow's, is 16 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 16 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 50, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 40, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 30, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 20, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 10, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 100, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 90, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 80, east of Hollow's, is 15 in. wide, worth 17d. per fm. The lode in the 70, east of Hollow's, is 15 in. wide, worth 17d. per

bottom of the 113, east of the same shaft, on Allen's branch, are worth on an average 15s. per fm. In the 103, east of the same shaft, Allen's branch is disordered and small. The stopes in back of the same level, on Allen's branches, are worth on an average 15s. per fathom. In the winze sinking under the same level there is no change to notice.

WHEAL UNION.—T. Glanville, Feb. 3: There is nothing new in our turf-work operations to report on. In the flat-rod shaft we are cutting down ground for bearers and cistern, and preparing to fix plunger-lift.

WHEAL UNITY CONSOLS.—W. H. Reynolds, Feb. 2: At the flat-rod shaft, sinking below the 50, the lode is 18 in. wide, and of a very kindly character for copper. The lode in the 50 west is looking much better, with good copper ore disseminated throughout, and we expect an improvement. We have cut the lode in the 40, at the western shaft, and it is one of the most promising lodes I have seen for some time; it is 18 in. wide, and made up of spar, with pyrite, blende, and copper ore. We are driving west, and are near the great cross-course against which East Trevarno lodes were so good.

WHEAL UNITY.—S. Coade, M. Rogers, Jan. 30: Tin Lode: We have been engaged in fixing the new pit-work at the 80 this week, and the bottom levels are all under water; consequently, we could not set them yesterday, but expect to resume driving them again sometime next week; it will not interfere with the returns, as we have supplied the stamps from Gooding's. The 80 fm. level rise, under Gooding's shaft, is progressing favourably by six men, at 6d. per fm. The 60 fm. level rise, under Gooding's shaft, we expect to hole in a day or two, when we shall cut ground, and bring down the skip-road at once. Copper Lode: The lode in the 68, west of No. 3 shaft, is worth 12s. per fm.; driving by four men, at 4d. 10s. per fm. The lode in the 68, east of shaft, is disordered at present, but we anticipate an improvement soon; driving by four men, at 5d. 5s. per fm. The 58, west of the new shaft, is driving by four men, at 5d. per fm. The new engine-shaft was not set yesterday, but shall do so on Monday to sink below the 58.

WHEAL VVYAN.—W. Teague, Feb. 2: The 55 fm. level end, driving west of engine-shaft, is nearing Ross's shaft, and when communication is effected, which will be shortly, will undoubtedly unwater a long run of tin ground gone down in the level above. This is an important feature, and gives us satisfactory reasons to say, when it is accomplished, we shall be enabled to break and send up a larger quantity of tin-stuff. The 40 fm. level end, west of engine-shaft, is yielding fair stamping work. The stopes in the back of this level, west of engine-shaft, is producing good stamping work. From the present appearance of the tribute ground, it gives us evidence to believe that it will soon improve. The cross-cut at the 40 fathom level is progressing satisfactorily. All our machinery is working well.

YARNER.—R. Barkell, Feb. 3: North Lode: We are pushing down the shaft below the 30 as fast as possible; the lode therein maintains its size, but it does not contain as much copper as when last reported on. The stopes in the back of the 20 is worth 2 tons per fathom.—South Lode: The 50 west is still passing through branches of ore and spar. There is no change in the ground. In the 50 east there are pitches of killas mixed up with the lode, which has disordered it for the present, and it is not so well defined. The pitch in the back of the 30, east of shaft, is still looking well—worth 2½ tons per fathom. The other two pitches are worth 2 tons per fathom each. All the machinery is working well.

DRYING PEAT.—Mr. C. E. Newcomen, of Ovington-square, Brompton, has invented an improved means of drying peat. He provides an air-tight chamber, into which the peat to be dried is wheeled; heat is applied to the outside of the chamber, and a vacuum, or nearly a vacuum, is created by means of a pump or other suitable contrivance. The combined evaporative and exhaustive actions greatly accelerate the drying of the peat.

MINERS' SAFETY-LAMPS.—An invention has been provisionally specified by Mr. Joseph Brooke, of Bar-street, Laister Dyke, which relates to certain improvements in safety-lamps, whereby they are rendered safer, and impart a better light than has hitherto been obtained from lamps of this description; also adapted to the burning of hydrocarbon mineral oils. The special improvement in the lamp consists in dispensing with the fine wire gauze round the flame. The cold air is admitted through adjustable air-spaces into a circular air-chamber, screwing the oil-pan below the flame of the lamp. Inside the said air-chamber are placed circular wire gauze plates, or cylinders of gauze. Next above the air-chamber is the bottom flange-plate, which screws to the air-chamber. Through the centre of the flange-plate projects the wick-tube and burner from the oil-pan below. On the top side of the bottom flange-plate, on its external circumference, are fixed four (more or less) equidistant metal pillars, which stand perpendicular to the flange-plate, and reach to the top of the lamp for connecting the upper with the lower part of the lamp; upon this bottom flange-plate rests the glass chimney and cylinder, the ends whereof are connected to the flange-plate by circular flanges. The top flange-plate admits of the metal pillars passing through it to where the adjustable screw rests of the pillars are placed for supporting the top flange-plate in position. The top flange-plate also rests on the top of the glass cylinder aforesaid, the top whereof is connected by a flange with the top flange-plate aforesaid, and the said flange make the safety connection between the glass chimney, glass cylinder, and top and bottom flange-plates. The upper part of the glass chimney projects through the top of the flange-plate into gauze caps. The upper part of the glass chimney projecting into the wire gauze caps has a metal chimney upon it, the object of which is to protect the glass chimney from cold currents of air, and to increase the draught. In lieu of the two hereinbefore described modes of ventilating the lamp below the flame, a third mode can be applied—namely, by making air-spaces in the top and bottom flange-plates perpendicular to the annular air-space between the aforesaid glass chimney and cylinder, by which means the cold air will enter the lower part of the gauze caps, pass through the top flange-plate down the annular air-space between the glasses, where it will become heated, and pass on through the bottom flange-plate into the air-chamber to the flame of the lamp, the gauze plates or gauze cylinder hereinbefore described not being required in this latter plan. The gauze caps have flanges through which the metal pillars pass; said flanges rest upon the top flange-plate. The ring-plate is placed over the gauze caps, from the under side of which descend four hollow cylindrical legs, a little longer than the gauze caps, which legs fit on to the metal pillars, and rest upon the cap-flanges, pressing them down upon the top flange-plate. The upper side of the ring-plate has a circular slide piece, fixed to it by slide rivets in grooves, which slide has four angular projecting locking-pieces, which lock into suitable lock-holes in the metal pillars aforesaid near their tops, thus fixing the ring-plate in position. The ring-plate has the ring fixed in its centre for carrying the lamp. Two locks are provided for locking the lamp—one at the top, the other near the bottom. This form of lamp can be made to burn animal oil, by fitting an animal oil-wick and burner (round or flat) in instead of the paraffin oil-wick and burner, and admitting the cold air through the lower part of the gauze caps and through air-spaces in the top flange-plate, by which means the air will descend the annular space between the glass chimney and cylinder and under the bottom of the glass chimney, which chimney will require to be raised a little above the flange-plate, to allow the air to pass under it to the flame. The gauze plates, or glass cylinder and air-chamber, before described in the paraffin oil-lamp, are not required in this last form of lamp. The inventor observes that the lamps will be useful on board ship and elsewhere, as well as in coal mines.

PROTECTING IRON AND STEEL FROM OXIDATION.—In preparing the hardening or indurating compound for the purposes of the invention of Mr. James Webster, of Birmingham, he takes about equal proportions of carbonate of potash and American ash, pulverised and mixed together, and to this is added hydrochloric acid, until carbonic acid gas ceases to be given off. The proportions in which the carbonate of potash and American ash are mixed are not material; and, in fact, he sometimes uses one or other of the substances without the other, or commercial chloride of potassium may be employed. The mixture, or combination of ingredients above named, is to be put into a close vessel, or retort, and heated so as to drive off the water, and reduce the mass to a homogeneous liquid state, when it is run off, ladled out, and cast into blocks, which become solid when cold. If chloride of potassium is used, it will only require the addition of a little free acid to render it suitable for the purposes of the invention. Of this mixture, which may be called No. 1, take about 17 per cent., and after roughly pulverising the same, thereto add 83 per cent. of yellow prussiate of potash, also roughly pulverised; these two ingredients are also melted in a close vessel, and when in a liquid state are fit for use, and may be called No. 2. This mixture may, however, if desired, be cast into blocks for future use, but when required for use must be reduced again to the liquid state. The metal articles to be operated upon are heated to a bright red heat, and in this state are dipped into the liquid or molten preparation, No. 2, after which they are to be left to cool a little, and then dipped in water, where they are to remain until cold. They may then be cleaned, if desired, and the hardening process will be complete. Many articles, however, require to be protected on their surfaces from oxidation, for which purpose he prepares a varnish composition, consisting principally of (say) 50 per cent. of paraffin oil, 15 per cent. of naphtha, 3 per cent. of tar, about an equal quantity of mixture No. 2, in a pulverised state, 20 per cent. of resin, and about half that quantity of heavy or tar oil. This preparation will answer very well for rough articles, which must be heated to about 300°, and then dipped in the composition. As a modification of the above varnish composition for coating the articles black outside, the following may be advantageously employed:—1½ lb. of the composition above named, No. 2, and containing the cyanide of potassium; gutta-percha, 4 lbs.; creosote, obtained from gas-works, 4 lbs.; linseed oil, 50 lbs.; and paraffin oil, 40 lbs.; also sufficient bisulphide of carbon to dissolve the gutta-percha. For finer articles, the above preparation, with a less quantity of linseed oil, will be found extremely useful. For steel articles the indurating or hardening process is not required, but the surface of the article may be protected by a similar varnish composition.

WEATHER PREDICTIONS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—In my last letter, I mentioned that winds would occur about the 3d—these winds were correct. Strong winds will occur again from about the 7th to the 9th; the temperature has considerably fallen; we shall now have some winterly weather during the next fortnight, with strong gales, from about the 21st to the 26th. I have been requested to inform the readers of the Journal how Admiral Fitzroy arrives at his daily forecasts of the weather. Well, it is as follows:—If the mercury in the barometer is rising, he foretells fine weather; if it is falling gently, rain; if rapidly, a gale. Certainly everybody ought to have known this. But I have already explained in my last letter that the action of the mercury in the barometer is not to be relied upon for foretelling the weather. In reply to another enquiry, in reference to my remarks on the lunar theory, I say Sir W. Herschel never did put forward any lunar theory at all. It is repeated by Sir John Herschel in the last number of "Good Words."

26, Throgmorton-street, Feb. 4. GEORGE SHEPHERD, C.E., Author of the "Climate of England."

To Directors, Solicitors, Secretaries, &c.

IMPORTANT TO ALL CONNECTED WITH PUBLIC COMPANIES.—Now ready, price 2s. 6d. A HANDY BOOK OF WHAT TO DO AND HOW TO DO IT, IN ORDER TO FORM ANY MERCANTILE, MINING, AND OTHER JOINT-STOCK COMPANIES. Designed as a PRACTICAL GUIDE for Projectors, Promoters, Directors, Shareholders, Creditors, Solicitors, Secretaries, and other officers. By THOMAS TAPPING, Esq., of the Middle Temple, Barrister-at-Law. London: Published at the Mining Journal office, 26, Fleet-street, E.C., and to be had of all booksellers and newsmen.

* * * With this week's Journal we give a SUPPLEMENTAL SHEET, which contains—Slate Quarrying in Easdale; Mining in Ireland—the Sheep's Head District; Institute of Mechanical Engineers; the Combmarlin, North Devon, Mining District, with Plan; Manchester Association for the Prevention of Steam-boiler Explosions; the Coal Trade of New South Wales; Free Trade in Inventions; Mining Statistics of Cornwall and Devon; Naval Construction; Compensation to Landowners; Ballantyne's Miscellany, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 5, 1864.

COPPER.	£ s. d.	BRASS.	Per lb.
Best selected... p. ton	116 0 0	Sheets	11½d.-13d.
Tough cake.....	113 0 0	Wire	10½d.-10d.
Tile	113 0 0	Tubes	11½d.
Burn Burra	116 0 0		
Copper wire	0 1 2½	FOREIGN STEEL.	Per Ton.
ditto tubes	0 1 2½	Swedish, in kegs (rolled) 15 10 0	—
Sheathing & bolts p. ton	120 0 0	Ditto (hammered). 16 0 0-18 0 0	
Bottoms	125 0 0	Ditto in faggots..... 17 0 0-18 0 0	
Old (Exchange)....	100 0 0	English, Spring	18 0 0-23 0 0
		Bessemer, Engineers Tool 44 0 0	
		" Spindles	30 0 0
		QUICKSILVER.	7 0 0 p. bottle
		SPELTER.	Per Ton.
		Foreign	21 10 0
		To arrive	21 10 0-21 15 0
		ZINC.	
		In sheets	26 10 0 27 0 0
		TIN.	
		English, blocks	116 0 0
		Ditto, Bars (in barrels)	117 0 0
		Ditto, merchant in Tees 6 12 6	121 0 0
		Ditto, Refined	121 0 0
		Railway, in Wales 7 15 0 8 0 0	120 0 0
		Banca	119 0 0
		TIN-PLATES.	
		IC Charcoal, 1st qua. p. bx. 1 11 0 1-13 0	
		IX Ditto 1st quality	1 17 0 1-19 0
		IC Ditto 2d quality	1 9 0 1-10 6
		IC Ditto 2d quality	1 15 0 1-16 6
		IX Ditto	1 12 0 1-13 6
		Canada plates	14 0 0
		In London : 20s. less at the works.	
		Yellow Metal Sheathing .p. lb. 10d.-10½d.	
		Sheets	p. lb. 10d.-10½d.
		Indian Charcoal Pigs	7 0 0-7 10 0
		In London	
		At the works, 1s. to 1s. 6d. per box less.	

REMARKS.—The intelligence received that hostilities have now commenced between the German and Danish troops, thus entirely destroying all hope that there might be a peaceful settlement of affairs, will undoubtedly have an unfavourable effect upon the Metal Market, as although the price of one or two particular metals may be considerably enhanced thereby, yet others will be much prejudiced, operations will be checked, and prices will tend downwards. It is vain to calculate for how long a period this war may continue, or what may be the ultimate result of it; but it is to be hoped that this country may not be induced to take part in the struggle, as it is undoubtedly very unsatisfactory to look forward to a change from our present position of prosperity and peace to the derangement of commercial affairs, which almost invariably follows in the path of war. At present the metal trade does not evince any very flourishing appearance, business continues very quiet, and the course of events on the Continent is being very anxiously watched, and operators generally are waiting to see what may eventually ensue. The continued tightness of the Money Market also tends to act unfavourably upon the metal market.

COPPER.—The market remains quiet, transactions are by no means numerous, and some second-hand parcels still remain upon the market, which may be obtained at 3d. to 4d. under smelters' prices.

IRON.—There has been rather more enquiry for iron during the past week, and orders have been given out for America, India, and the Continent, and, though the orders are not large, the principal makers are pretty full for some weeks to come, and in some departments for the whole quarter; still there is good reason to think that a considerable number of orders are being held back, and must soon be given out. In fact, the trade is only now coming to the last advance, as many orders are now even being executed at the prices which prevailed before the last rise, and buyers are inclined to wait and see if they can buy any cheaper; but of this there appears no probability at present. Swedish iron is looking rather better, and may be quoted at 5s. to 10s. per ton higher than formerly. The prices of Scotch pig-iron have been gradually receding during the week, political affairs having, as usual, acted upon the market, and caused unfavourable changes to take place. At the commencement of the week prices stood at 63s. to 63s. 3d. cash, 64s. 3d. to 64s. 9d. three months; then fell to 62s. cash, and 63s. 6d. three months. It afterwards rallied to 62s. 1d. cash, and 63s. 9d. three months, and the last advices from Glasgow state that a good business had been done at somewhat irregular prices, the market closing at 62s. 3d. cash, 62s. 9d. one month, and 63s. 9d. three months.

LEAD.—The market continues firm, with a fair business doing at 21d. 10s. for common English pig, and 22d. 5s. to 22d. 7s. 6d. for WB.

TIN.—Business in this metal remains very limited; prices continue without alteration. A small parcel of Straits has been sold at 119s., but there are sellers at lower rates for larger parcels. Advices from Amsterdam state the price of Banca there to be 7½ ds., at which there remain sellers. The stock in the hands of the Trading Society for the next sale is 75,338 slabs, against 75,500 slabs same time last year.

SPELTER.—Transactions in this metal still continue limited; prices have, however, somewhat advanced, and, now that war has actually commenced on the Continent, there is every probability of prices still going higher. Some parcels have been sold on the spot at 21d. 15s., for Feb. delivery at 21d. 10s., and for March delivery at 21d. 15s. The stock in London at the commencement of the month was 61,777 tons, being an increase during the month of 841 tons.

STEEL is without any alteration.

TIN-PLATES.—A fair business is doing, and makers are firm at the advanced rates.

QUICKSILVER.—The position of this metal continues still the same.

SCOTCH PIG-IRON.—"Figures are independent of sentiments and sympathies." In the spring of 1848, when war broke out in Germany, the stock of pig-iron in Scotland was 100,000 tons, and the furnaces in blast were 100, producing 11,500 tons weekly. The price was then 50s. per ton, and it thereafter rapidly fell to 40s. per ton, fluctuating between 38s. and 45s. till July, 1852. To-day the stock is upwards of 800,000 tons, with 134 furnaces in blast, making about 24,000 tons weekly. The price is 62s. 6d. per ton, being about 10s. per ton above the average of the last six years.

MIDDLEBROUGH-ON-TEES, JAN. 30.—Our pig-iron market has experienced no change during the month. Prices are the same as last reported. The decline in Glasgow and the Danish question have produced no results of a prejudicial character, beyond the fact that buyers are less anxious to place orders, in the hope of the ironmasters relaxing their prices, which in the present temper of the market is not likely to take place. It is true that prices in Glasgow have receded considerably; but then, the Glasgow market is purely a fluctuating one. Dear money and the Schleswig complications have had the effect of forcing it down, and the "bars" have laboured assiduously to give effect to the fall to suit their own ends. Manufactured iron has advanced 10s. per ton on some descriptions, and 20s. per ton on others. The exorbitant demands of the men for increased wages have been complied with, and the manufacturers had no alternative but to protect themselves by a further advance.—ROBERT STEPHENSON AND CO.

land shares were again ineffectually pressed for sale. The failure of Mr. Thomas Saunders Cave, the proprietor of the once famous Audley Mines, is much regretted, as likely to injure the general mining interest of Ireland. It is a fact well known by the better informed, that legitimate mining enterprise is not the cause of Mr. Cave's present difficulties, no more than it was of his former bankruptcy.

The detailed prospectus of the New Combartin Silver-Lead Mining Company, to the formation of which we alluded in our last, will be found, together with a plan of the mine, showing the various lodes, &c., existing in it, in the Supplemental Sheet given with this day's Journal. Great interest attaches to the sett, from the fact that it is generally considered to be that referred to by the historians of antiquity as being particularly rich and valuable. The capital which it is proposed to raise to develop the enterprise is £16,000, in shares of £1 each, but this amount will only be called up as required, it being distinctly stated in the prospectus that no call, beyond the £15s. payable up to the date of allotment, will be made for one year, and that subsequent calls will not exceed 5s. per share per three months. The lease is held for 21 years, at 1-15th royalty, and there is an excellent stream of water for dressing purposes, as well as unusual facilities for carriage of materials and freight of ore. The ore already raised is of first-rate quality, and it is considered questionable whether more than the allotment deposit will be needed before the mine is in a position to pay cost. It appears that 17s. 5s. per ton has been offered for the ore by Sims, Willyams, and Co., of Llanelli. The vendors have agreed to accept 2000 paid-up shares as payment in full for the property.

The West Clifford United Tin and Copper Mining Company, with a capital of £30,000, in shares of £1 each, has issued its prospectus. It is considered that the prospects of the West Clifford United will bear comparison with any progressive mine in the county. The purchase-money has been fixed at £10,000, one-half of which will be taken in paid-up shares of the company. The reports of Capts. Elisha Ralph, Francis Pryor (who occupies a seat at the board), the late William Martin, Thos. Richards, and James Rowe will be found appended to the prospectus, which appears in another column of this day's Journal.

The Old Wheal Lopes is about to be re-worked, on the Limited Liability Principle, as the Devon Wheal Jewell Company. The mine was worked by a company of local adventurers some years since, who, it is stated, expended considerable sums in opening the mine, and had raised some good copper ores; but having several other adventures in hand, and the copper standard having fallen very low, whilst blonde, of which there was a large quantity in the upper levels, was then unsaleable, they determined to stop working, though, in the opinion of practical men in the neighbourhood, there was every prospect of making large returns in depth. The lord, the late Sir Ralph Lopes, was so annoyed at not receiving profits, that he refused to grant another sett, although frequently applied to for it. When the present lord, Sir Massey Lopes, M.P., succeeded to the property, a lease was granted to a few adventurers, and a London company was formed for working it, but the funds having been exhausted, it was decided to abandon the enterprise, although some good machinery had been erected. The promoters of the present adventure consider that there is an opportunity for stepping in to reap the advantages of their predecessors' outlay. The presence of copper in large quantities in the lower levels is well known to practical miners in the neighbourhood, who have worked in the mine, and it must be borne in mind that copper is nearly double the price now that it was then. The lode is left standing in the shallow levels, and has been examined to the 30, being largely mixed with blonde, and estimated to yield now more than £4000. An ample supply of water affords a cheap and ready motive-power, while the Plymouth and Tavistock Railway runs close by the mine.

The Titanic Iron and Steel Company, to the formation of which allusion was made in last week's Journal, have given notice that the list of applications for shares will be closed on Saturday next for London, and on the Monday following for the country, after which the allotment of shares will be proceeded with. The vendors' shares are only entitled to dividend when the other shares receive dividends at the rate of 6 per cent. per annum, after which they receive all surplus up to 6 per cent. on their shares, any further surplus being divided equally. It is remarked that the quantity of steel now consumed in England is very large, and is daily increasing, in consequence of the use of that material for railway tyres, rails, points, crossings, and other purposes to which it has not hitherto been applied to any considerable extent, in consequence of its great cost. The engineers who have been consulted by the directors have reported favourably upon the undertaking.

The Wallachian Petroleum Company, with a capital of £120,000, in shares of 10/- each, has issued its prospectus. The company has been formed for the importation from Wallachia of petroleum, proved by analysis to be equal, if not superior, to the Pennsylvanian, and the purchase of the grants and concessions enjoyed by the Earth Oil Import Company, the *réchauffée* company simply agreeing to adopt the first company's outlay for purchase of oil, advances on forward delivery, tanks, &c.—this arrangement being of mutual advantage, three of the Earth Oil directors have joined the board. The advantage of the efficient transport service organised by the old company will thus be secured, together with all the grants and concessions. It is mentioned that the grantees and contractors are under contract with the company, for fifteen years, to deliver the oil at Ibrahim, at 5/- per ton, in consideration of their sharing with the company, in equal moieties, the net profits derived from the sale on this side—an arrangement calculated to ensure a large profit to the shareholders, and which will prevent the necessity on the part of this company of any but a very small outlay in plant. A cargo of the oil has already arrived, and will yield a very satisfactory profit.

The Great Eastern Northern Junction Railway prospectus has been issued under the auspices of the General Credit and Finance Company of London. The capital is £1,500,000, one-half of which has been already placed; and the remainder, upon which the deposit on application is limited to 10/- per share, and no other payment will be required until after the passing of the Act, will be offered to the public. The railway is not without importance to the readers of the *Mining Journal*, its object being to put the coal fields of the North in direct communication with London. The company proposes to make a trunk line in extension of the Great Eastern main line through Cambridge, from Stanton, near St. Ives, and proposed to pass through Ramsey, Peterborough, Lincoln, and Gainsborough, to Doncaster and Askern, communicating at Peterborough, through the Great Eastern Station, with the London and North Western, the Midland, and Great Northern Railways—forming junctions at Lincoln with the Great Northern, the Midland, the Manchester, Sheffield, and Lincolnshire, and at Gainsborough with the two latter companies—and forming junctions near Doncaster and Askern with the West Riding and Grimsby Railway, through which it will reach Wakefield, with the South Yorkshire, gaining access to the Great South Yorkshire coal field, with the Great Northern at the Doncaster Station, with the Lancashire and Yorkshire at Askern, and with the North Eastern for Hull, through the South Yorkshire Railway at Thorne. The Great Eastern agree to work and maintain, and pay all revenue expenses of the line, when made, upon receiving 45 per cent. for working expenses, and other arrangements have also been made, the result of which is that "practically the shareholders are guaranteed a minimum dividend of 5/- per cent., without any limit as to the maximum." The chairman and five directors of the Great Eastern Railway are upon the board.

At Redruth Ticketing, on Thursday, 3382 tons of ore were sold, realising £20,426.7s. 6d. The particulars of the sale were:—Average standard, 136.3s.; average produce, 6s.; average price per ton, £1.1s.; quantity of fine copper, 218 tons 6 cwt. The following are the particulars:

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Dec. 31.	3281	£126 0 0	6s	£1.00	£27 18 0
Jan. 10.	1815	136 18 0	6	5 9 0	91 1 0
" 21.	5529	144 6 0	5s	5 6 0	94 19 0
" 28.	3873	137 1 0	6s	6 5 0	95 4 0
Feb. 4.	3384	136 3 0	6s	6 1 0	93 11 6

Compared with last week's sale the decline has been in the standard 11.15s., and in the price per ton of ore about 2s. 6d. Compared with the corresponding sale of last month, the advance has been in the standard 4s., and in the price per ton of ore about 5s.

At the East Rosewarne Mine meeting, on Monday (Mr. Rowlands in the chair), the accounts showed a credit balance of £201.6s. 3d. Details elsewhere.

At the East Wheal Fortune (Sithney) general meeting, on Wednesday (Mr. C. B. Parry in the chair), the accounts for the nine months ending Dec. 31 showed a credit balance of £411.1s. 1d. It was resolved that Mr. John Hitchins be appointed London agent. The report stated that the adit level was within 40 fathoms of the great intersection of lodes, where the opinion of all practical miners acquainted with the district that an extraordinary deposit of the will be found. The sett is situated in one of the richest tin districts in Cornwall, having on the west the far-famed Wheal Vor and Wheal Metal, and to the east the rich lodes of Wendron; and from the numbe

of lodes running through the sett, with their many intersections, there can be but one opinion—that East Wheal Fortune is a sett of great value.

At the Wheal Ludcote and Wrey Consols meeting, on Wednesday (Mr. J. C. Isaac in the chair), the accounts showed a debit balance of £15.17s. 6d. A call of £s. per share was made. Capt. Robert Knapp reported upon the points of operation. He hoped to get raised 20 tons of ore for the market by the next general meeting, which in addition to the 40 tons already at the surface will make the first sale 60 tons.

At the Wentor Mining Company meeting, on Jan. 29 (Mr. W. Page in the chair), the accounts to Dec. 31 showed a credit balance of £121.9s. 2d. Messrs. Miers and Barnes were re-elected directors, and it was resolved that the course of working suggested by Mr. William Parry be approved.

At Craddock Moor Mine meeting, on Jan. 28, the accounts for Sept. and Oct. showed a credit balance of £227.6s. A call of 2s. per share was made. Captain Richard Pasco reported that their prospects were very encouraging. He hoped to get raised 20 tons of ore for the market by the next general meeting, which in addition to the 40 tons already at the surface will make the first sale 60 tons.

At the Great Laxey Mining Company special general meeting, on Wednesday (Mr. W. Tuxford in the chair), the resolutions passed at the special general meeting of shareholders, on Jan. 13, altering the 14th and 50th regulations of the company were unanimously confirmed.

At Penhallo Moor Mine meeting, on Jan. 25, it was resolved that the mine should be carried on upon the Cost-book System, in 512 parts, or shares. A call of 2s. per share was made. Capt. George Tremayne was appointed manager, at 3s. 2s. per month; and Capt. Joseph Champion resident agent, at 7s. 7s. per month. Messrs. Loam and Son were appointed engineers, and Messrs. Vigurs and Thomas Boyle, Jun., surgeons of the mine. It was resolved that Messrs. Waters, H. B. Champion, Loam and Son, and Captain Grose, together with the agents of the mine, be authorised to apply an engine of sufficient size to prove the ground, and that the same be erected as soon as practicable on such part of the sett as they may determine. Capt. J. B. Champion reported favourably upon the sett: it is an extensive one, through which several lodes producing lead and silver ore pass; it is a part of East Wheal Rose original sett, and the lodes are partially laid open. It is of highly mineralised character, and in what is well known to be the greatest lead-producing district in Cornwall.

At Wheal Trannack meeting, on Jan. 26, the accounts showed a debit balance of £91.1s. 8d. A call of 2s. 6d. per share was made.

At the Calvadnack Mine meeting, to be held on Wednesday, the accounts to be submitted show—Call, 3201.; black tin sold, 2342.2s. 6d.; extra carriage, 11.13s. 3d.; old store sold, 31.13s. = 2688.6s. Balance last audit, 3282.5s. 9d.; mine cost, 17862.1s. 7d.; merchants' bills, 4507.2s. 9d.; dues (say), 701.7s.; leaving credit balance, 351.15s. 1d. The report will be of an unusually favourable character.

At the West Wheal Jane meeting, on Thursday, a call of 3s. 6d. per share was made.

At Penrhine Mine general meeting, on Friday (Mr. J. Bird in the chair), a call of 2s. per share was made. The meeting was adjourned to March 15, waiting a special report of the mine.

At Roskear Mine meeting, on Jan. 30 (Mr. J. E. Square in the chair), the accounts for the three months ending Dec. showed a credit balance of £2913.19s. 3d. It was resolved that Capt. Skewis be requested to ascertain on what terms he can obtain a second-hand or new 60-in. cylinder-engine, with two 11-ton boilers.

At the Durn Mountain Copper Mining Company meeting, on Monday (Mr. Scander in the chair), the report of the directors was received and adopted. Details in another column.

BOSTON, JAN. 18.—Sidney and Pictou Coal remain without change. There have been sales of Sydney at 8s to 8s 6d.; and Pictou at 8s 5d. to 9s per ton. English Cannon is selling in small lots at 15s to 17s per ton, cash. Anthracite has been in steady retail demand at 12s per ton. The market is very firm for Scotch pig-iron, with sales at 8s 6d. to 9s per ton, cash and four months, for Gartsherrie and other brands No. 1; and American No. 1 at 17s to 19s per ton. In bar-iron the sales have been in small lots, but at full prices. In Russia sheet-iron the sales have been in small lots at 22s to 25s per pound, as to size.

NEW YORK, JAN. 20.—Refined ingot copper has been in animated demand at 39 1/2c. to 40 1/2c. for Baltimore, 40c. for Bergenport, and 41c. to 42c. cash, for Lake Superior, with sales of 2,050,000 lbs. during the week. Yellow metal sheathing has advanced to 36c., and ditto bolts to 38c., six months. New sheathing bolts and brassers copper command 50c., six months. Domestic coal is plenty, and the market is heavy; small sales at 7s to 10s from yard. Foreign is higher, and in fair demand; sales of 20,000 tons Gas Cannel and 100 tons Kirkless Hall, Canal, here and to arrive, on private terms; 1500 tons Liverpool Gas Coking at 10s; 10 tons Blackburn House Cannel at 18s; and 200 tons Ravenswood Gas Cannel at 13s, delivered. The regular monthly sales of Scranton is announced for the 27th inst.

YUDANAMUTANA MINES.—The Orient, from Port Augusta, South Australia, with 240 tons of copper ore on board, the produce of these mines, has arrived in London. Three other vessels, named respectively the Countess of Fife, Clan Alpine, and John Norman (the two first of which are now due), having collectively about 400 tons, are shortly expected. Previous parcels of ore from these mines, sold at Swansea, having averaged 33 per cent. of copper, the above quantities will, therefore, in all probability, give a total of 20,000t.

RICH FOREIGN COPPER ORES.—The ship Oracle has just reached England from Chili, conveying upwards of 1000 tons of rich copper ores from the valuable Chilean copper mines of Mr. Sampson Waters, of Gyllyngdune, having accomplished her passage—we believe the shortest on record—in 74 days. This ore will yield a produce of from 26 to 30 per cent., and is worth upwards of 24,000/. The late rise in the copper standard greatly affects these mines; and the cargo here referred to will fetch from 6s. to 7s. per ton more now than at the time it was shipped. One of our correspondents states that a very important run of ground has taken place at the San Pedro, one of the very rich copper mines in Chili, of which Mr. Waters is the sole proprietor. Full particulars will not be received until after the arrival of the next mail; but it is stated the run will involve the necessity of sinking a new shaft from surface to the 100, to enable them again to get under the ore ground, which will, probably, cause a delay of 12 months, and an expenditure of 40,000/, or 50,000/. The other mines of Mr. Waters, especially the Descubridora, are, if anything, richer than ever, as 1000 tons a month can be taken away without any appreciable difference in the mine, and at merely nominal cost. The ores of this mine, which is 70 miles nearer the coast than the San Pedro, are shipped at Pan de Azucar.

VALUABLE INVESTMENT.—FOR SALE, 108 North Rosewarne, 6 South Gorland, 6 West Penstrith, 60 Aberffraw, 12 Nant-y-Iago, being mines in the office of Mr. Richard Tredinnick, Lombard-street. £90 will be taken for the above.—Apply to Mr. Bissor, 16, Abchurch-lane, City.

M. R. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C., pays particular attention to British Lead, Copper, and Tin Mines, for which he solicits orders to sell or buy, at net prices.

Mr. BATTERS can recommend one or two mines safe for an early rise of 100 per cent.; reliable information afforded on application.

BUYER OF Chiverton.

SELLER OF 15 Central Miners, £3; 5 Brynford Hall, £16; 60 West Trevelyan, 3s. Parties would do well to apply to Mr. BATTERS as to buying or selling Central Miners shares.

M. R. C. H. ANDREWS, STOCK, SHARE, AND MINING BROKER,

7, CROSBY HALL CHAMBERS, BISHOPSGATE STREET, E.C.

ANDREW'S "Stock Exchange Evening Prices and City Financial Circular" contains an epitome of the day's transactions in the English Funds, Foreign Stocks and Bonds, Railways, Joint-Stock Banks, Miscellaneous Shares, and Mines.

ANDREW'S "Daily Circular" also contains particulars of the movements in Bullion, variations in the Foreign Exchanges, and impartial accounts of the Money and Discount Markets.

M. R. THOMAS CARTHEW, MINING OFFICES, 12, BUCKLERSBURY, LONDON, E.C.

Reliable information respecting mining generally can be obtained by applying as above.

Bankers: Robarts, Lubbock, and Co., 15, Lombard-street, London.

M. R. WALTER TREGELLAS, STOCK AND SHAREBROKER, 12, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

Mr. TREGELLAS strongly recommends the purchase of Santa Barbara Gold, North Shepards, and Chiverton Consols shares.

M. R. D. STICKLAND, M.E., having had upwards of 40 years'

Mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

MINES INSPECTED and faithfully REPORTED ON. DEALER IN MINING, RAILWAY, and OTHER SHARES.

His monthly "Circular" for December contains a selected list of Cornish and other mines. Forwarded on receipt of six postage stamps.

38, Dowgate-hill Chambers, London, E.C.

M. R. EDWARD BREWIS, STOCK, SHARE, AND MINING BROKER, 49, GREY STREET, NEWCASTLE-ON-TYNE,

would respectfully request the public, before operating in the MINES of the NORTH or ALSTON MOOR DISTRICT, to apply to him, as it may be the means of saving them hundreds of pounds.

Bankers: Hodgkin, Barnett, Pease, and Spence.

JAMES H. COCK, MINE SHAREBROKER AND DEALER,

REDRUTH, CORNWALL.

J. H. Cock, having had 10 years' experience in the mining market, and being thoroughly acquainted with mines and their management, is in a position to advise or do business on the most advantageous terms. Cash or time bargains promptly attended to.

TO SPECULATORS.—MR. HALSE, the writer of the letters

signed "A Cautious Man," is always in a position to recommend a few good dividend mines; also one or two mines where the shares are selling at a few shillings each, and in which the chances of a good rise are very great. A capitalist with about £30,000 could make 20 per cent. of his money if he would act as Mr. HALSE would recommend.—Address, Mr. HALSE, Sharedealer, 28, Threadneedle-street, City.

T. INVESTORS.—CONSULT MR. GRIFFITH, 27, LEADENHALL STREET, LONDON, E.C., who ADVISES as to the RESPECTABILITY, VALUE, and PROBABLE PROSPECT of SUCCESS of ANY SCHEME, PUBLIC COMPANY, &c., whether already established or in course of formation.

MONEY.—CONTRACTORS and OTHERS can be ACCOMMODATED with LOANS, DISCOUNTS, &c.—Apply to Messrs. WILKINSON and Co., monetary negotiators and arbitrators, &c., 25, Birchlin-lane, Cornhill, London, E.C.

THE TIN TRADE.—(From a Correspondent).—In proof of the fallacy of the argument that the miner would obtain a better price for his tin ores were the system of sale by ticket re-introduced as a substitute for the present system of private sale, it should be well understood that the margin between the price paid to the miner and the price paid by the consumer, was probably never smaller than at present, and that as that difference is only about 5s. per ton, the miners could not hope to receive more than at present by any change being introduced, whilst they might be compelled to accept considerably less. The standard for tin is at present—Common, 111s.; best common, 112s.; fine, 113s.; and best fine, 115s

[ABRIDGED PROSPECTUS.]

TITANIC STEEL AND IRON COMPANY (LIMITED)
Capital £360,000, in 2000 shares of £100 each, of which only 400 will be created, and £16,000 shares of £10 each.
Deposit, £1 to be paid on application, and £1 on allotment.

DIRECTORS.—
ALEXANDER CLUNES SHERIFF, Esq., Shrub Hill House, Worcester—Chairman,
JOSEPH WHITWELL PEASE, Esq., Woodlands, Darlington (Director of the North-Eastern Railway Company)—Deputy-Chairman.
WILLIAM AKROYD, Esq., Parkfield, near Stourbridge (Chairman of the Stourbridge Railway Company).
M. HARTLAND, Esq., The Oaks, near Cheltenham (Director of the Gloucestershire Banking Company).
GEORGE LEEMAN, Esq., York (Deputy-Chairman of the North-Eastern Railway Company).
HENRY PEASE, Esq., M.P., Pierremont, Darlington (Director of the North-Eastern Railway Company).
ARTHUR PEASE, Esq., Darlington.
JOHN PARSONS, Esq., Ham Common, Surrey (Director of the Great Western Railway Company).
ISAAC WILSON, Esq., Nunthorpe Hall, Middlebrough-on-Tees (Director of the North-Eastern Railway Company).

BANKERS.—
Messrs. William Deson & Co., London.
The Worcester City and County Bank, Worcester, and at all its branches.
The Gloucestershire Banking Company, Cheltenham, and at all its branches.
Messrs. Stuckey's Banking Company, Bristol.
The Birmingham Banking Company, Birmingham.

BROKERS.—
G. W. Shireff, Esq., 4, Bank-chambers, Lombury, London, E.C.
James Shepherd, Esq., Auction Mart, 4, Bartholomew-lane, London, E.C.
W. T. Adcock, Esq., 14, Foregate-street, Worcester.

SOLICITORS.—Messrs. Burrell, 5, Broad Sanctuary, Westminster.
ENGINEER—Robert Charles May, Esq., C.E., Great George-street, Westminster.
GENERAL FINANCIAL MANAGER AND SECRETARY.—
F. Dixon Hartland, Esq., The Oaks, near Cheltenham.
MANAGER OF MANUFACTURING DEPARTMENT.—R. Musket, Esq.

TEMPORARY OFFICES,—BELGRAVE HOUSE, CHELTENHAM.

The company has been formed for the purpose of working (and granting licences to use) the processes for improvement in the manufacture of steel and iron invented by Mr. Robert Musket, of Coleford, Gloucestershire.

These improvements are all protected by letters patent (now the property of the company), and are being extensively used at the works at Coleford, which the company purchased from Messrs. Musket & Co., and upon which they have expended, and are still expending, a considerable sum in improving and adapting them to the increasing business of the company.

The quantity of steel now consumed in England is very large, and is daily increasing, in consequence of the use of that material for railway tyres, rails, points, crossings, and other purposes to which it has not hitherto been applied to any considerable extent in consequence of its great cost.

The processes of Mr. Musket, especially when in combination with the Bessemer process, will produce, from materials which will cost about £5 per ton, steel in no way inferior to that produced from the best Swedish iron.

For the letters patent, the goodwill of the business, &c., Messrs. Musket & Co. have agreed to accept paid-up shares; and such confidence have the patentees in the success of the company, that they have agreed that the shares so accepted by them shall not be entitled to any dividend except when the other shares receive dividends at the rate of £5 per cent. per annum, after which they will receive all the surplus up to £5 per cent. on their share, any further surplus being divided equally.

The company is already registered with limited liability, and has been gradually getting into operation for rather more than a year. The accounts for the last half-year, now being made up, will show that, notwithstanding the unfinished state of the works, sufficient has been earned (exclusive of royalties receivable by the company) during that period to pay a dividend at the rate of 6 per cent. per annum on the proprietors' shares. The directors and their friends have subscribed for and paid up all the two hundred £100 shares available for the public, and upon three thousand of the £100 shares, making a total subscription of £50,000, and have thus, as well as by having borne all the risk and labour consequent on the formation of the company, and the first getting it into operation, given the very best proof of their confidence in the undertaking. They desire now to extend its basis and enlarge its operations, and with that view they offer the remaining five thousand £10 shares to the public, for which application must be made in the form annexed to the prospectus, either to the secretary, bankers, or brokers of the company.

The Articles of Association, and the reports of the engineers consulted by the directors, can be seen at the offices of the company, or at the brokers.

A deposit of £1 per share must be made with the company's bankers on application (which will be returned in the proportion in which any shares so applied for shall not be allotted), and a further £1 per share on allotment.

TITANIC STEEL AND IRON COMPANY (LIMITED).—Notice is hereby given, that the LIST OF APPLICATIONS FOR SHARES in this company will be CLOSED on SATURDAY, the 13th February, for LONDON, and on MONDAY, the 15th February, for the COUNTRY, after which latter date the directors will proceed immediately to allot the shares.

By order.

Belgrave House, Cheltenham, February 3, 1864.

QUELLYN SLATE QUARRY COMPANY (LIMITED).—WORKS, CARNARVON, NORTH WALES.
Capital £20,000, in 4000 shares of £5 each. Deposit, 10s. per share on application, and 10s. on allotment.

Calls, £1 per share, at not less intervals than three months.
Incorporated under the Joint-Stock Companies Act of 1862, limiting the liability of each shareholder to the amount of the shares allotted to him.

First issue, £12,000. No less number than five shares will be allotted.

DIRECTORS.—
Mr. WILLIAM GARFORTH, Halifax. Mr. BENJAMIN WALKER, Halifax.
Mr. ALFRED BANCHFORD, Halifax. Mr. RICHARD SPENCER, Halifax.
Mr. JAMES BAIRSTOW, Halifax. Mr. JAMES HIRST, Halifax.
Mr. SAMUEL WIMPENNY, Holmfirth.

BANKERS—The Halifax Joint-Stock Banking Company.
SOLICITOR—John Edwards Hill, Esq., Halifax.
MANAGER—Mr. John Lloyd, Surveyor, Carnarvon.
SECRETARY—Mr. John Clay, Accountant, Halifax.

OFFICE, 20, COW GREEK, HALIFAX.

This company is formed for working a slate quarry about eight miles from Carnarvon. The quarry has been opened, and proved to contain slate of a very superior quality. The lease is for 30 years, renewable for 30 years. More than one-third of the shares are already applied for, therefore an early application is necessary.

Samples of the slate from the quarry may be seen at the office, and also plans and sections of the quarry.

Prospectuses and forms of application for shares may be had on application to the secretary.

CENTRAL GRYLLS MINING COMPANY (LIMITED).—Incorporated under the Companies Act, 1862.

Capital £6000, in 2000 shares of £3 each. Deposit, £1 per share on application, and £1 10s. per share on allotment.

DIRECTORS.—
FAITHFUL COOKSON, Esq. (Messrs. Faithful Cookson and Co.)
CHAS. D. HAFFENDEN, Esq., 49, Lansdowne-road North, W.
EDWARD S. HARDING, Esq., 1, Great Winchester-street, E.C.
JOHN HAFFENDEN, Jun., Esq., Director South Grylls Mining Company.
EDWARD PITMAN, Esq., 2, Ledbury-road, B.A. after, W.
ERNEST G. FELLOWE, Esq., Surbiton, Surrey.

BANKERS—The English and Irish Bank, 25, Poultry, E.C.
AUDITOR—Alfred Whitworth, Esq., Accountant, Manchester.

SECRETARY—Offices—Mr. Henry Rhodes, 95, Gracechurch-street, E.C.

PROSPECTUS.

This company having purchased the lease of a mineral property of great value, situate in the parish of St. Hilary, about three miles from Marazion, in the county of Cornwall, and in the setts now so successfully worked by the Wheal Grylls Company, proposes to thoroughly develop it. The property is within a short distance of the Wheal Grylls Company's works on the Georgia lode, which has proved so productive and profitable.

The Georgia lode runs through this property, and it can be opened up at a moderate cost, when it will doubtless give sufficient returns to place the shares of this company on a proportionate equality in value with those of the Wheal Grylls Company, which, with £2 4s. per share paid, are now at about £27 per share.

The description of tin produced from the Georgia lode is the best black, and commands a high price in the market.

The company have secured a lease of the property for a period of 21 years, at the moderate royalty of 1-18th on all ores raised and sold.

Until the present no lease has been granted of this property, the owner of the land declining to have the surface interfered with; but his decease has removed the difficulty heretofore existing, and the present lease has been granted by his trustees for 21 years.

The directors are prepared to receive applications for a limited number of shares, but no application will be considered unless it is accompanied either by the bankers' receipt, or a remittance for the amount of the deposit of £1 per share on the number of shares applied for.

Prospectuses, with report, forms of application for shares, and all further information, may be obtained on application at the offices of the company, or from the bankers.

Where no allotment is made, the deposit will be returned in full.

Report from Capt. J. RICHARDS, Agent at the South Grylls Mine.

Dec. 26, 1863.—This mining property, known by the name of Ingwidden, is situated in the parish of St. Hilary, in the county of Cornwall, in the midst of mines which have produced large quantities of mineral and profits to the adventurers. It is surrounded by the Wheal Grylls sett, and the rich Georgia lode, now so productive and profitable in that mine, runs through this land. I believe Wheal Grylls' present works on the Georgia lode are within about 100 fms. of this sett. There are some ancient workings in this property on the Georgia lode, and from the appearance and accounts given it must have yielded a large quantity of tin. The operations were not carried very deep, the water preventing them, and when again worked there is a good reason to believe it will prove a rich lode, as in the adjoining mine it has proved one of the richest lodes ever worked in the country. The lode can be opened up at a very moderate expense, and as the results would be of so important a character I strongly recommend this being done without any delay. It is stated that the ancients reported a fine copper lode to exist also in this property, of which I can see no signs at surface, but from information I have received I have good reason to believe that such is the case. It could be proved for a very small amount of money, which I recommend doing, and should it prove as stated a valuable mine will at once be laid open. If this said copper lode was ever operated on by old miners the signs at surface are removed on account of the land being brought into the state of cultivation, which is very likely to be the case. The position of this property is highly favourable, there being many thousands pounds profit realised on both sides of it, and has the same channel of ground and lodes running through it. I recommend your opening it yourself, as I feel convinced you must obtain large returns.

JOSEPH RICHARDS.

SCHIELE'S PATENTS.

SCHIELE'S PATENT TURBINE WATER WHEELS.
PLATT AND SCHIELE'S PATENT SILENT FANS.
SCHIELE'S PATENT BLAST ENGINES.
SCHIELE'S PATENT VENTILATORS FOR SHIPS.
PLATT AND SCHIELE'S PATENT MINE VENTILATORS.
SCHIELE'S PATENT AIR PUMPS OR GAS EXHAUSTERS.
SCHIELE'S PATENT GOVERNORS.
PLATT AND SCHIELE'S PATENT COMPOUND BLAST ENGINES.

Notice is hereby given, that the NORTH MOOR FOUNDRY COMPANY, OLDHAM, have the SOLE and EXCLUSIVE RIGHT to MANUFACTURE and SELL the MACHINES KNOWN and USED UNDER the ABOVE NAMES.

Mr. SCHIELE has NO INTEREST whatever in the ABOVE INVENTIONS, having ABSOLUTELY ASSIGNED THE SAME to MARTIN SCHUNCK, Esq., by a deed dated 1st July, 1863, executed pursuant to an order of the Lancashire Court of Chancery.

Every attempt to use the above machines (unless purchased from the North Moor Foundry Company), whether under alleged "new patents," "latest patents," or "patents of 1863," or any other similar *ad captandum* title, will, immediately on its becoming known, be made the subject of legal proceedings.

LEWIS, DARBYSHIRE, AND ASHWORTH, Solicitors,
21, Brown-street, Manchester.

MINE SHARE DEALING.—Having bought, for the account before last, shares in East Wheal Russell of two parties, I received some days since, signed and duly stamped, transfers, the which, on presentation, I found to be worthless, neither of the parties having a single share on the books in either of their names. One of them also had given a previous transfer. If this is, as I already suspect, a mal-practice, and which, I fear, is too general, I ask the favour not only of an exposure in the Journal, but also to bring it under the notice of the committee of the Mining Exchange.—SIXX.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, FEBRUARY 6, 1864.

Although formerly the simple statement that the Bank minimum rate for money was 3 per cent. would have been regarded as equivalent to declaring that speculative and industrial enterprise was in a lamentable depressed condition, circumstances have, happily, so completely changed, that at the present time capitalists are enabled calmly to watch the increase and diminution of the pressure applied by the Bank directors, and to comprehend that changes in the price of money, when made with the judgment almost invariably exercised in Threadneedle-street, act only as a regulator, without in any appreciable degree affecting injuriously the machinery to which it is applied. Capitalists now thoroughly recognise the fact that the occurrence of certain events renders it more desirable that money should stand at 8 per cent. than at 4 per cent.; and that when the Bank rate is suited to the circumstances of the day, the general business affairs of the country go on quite as smoothly and profitably with a high rate as with a low one. But this is not all. The development of the joint-stock principle has permitted profits so enormously high, as compared with ancient notions, that speculators can now better afford to pay even 10 per cent. for monetary accommodation than a few years since they could have afforded 5 per cent. When it was considered something extraordinary for a public undertaking to earn 10 cent. per annum, it can readily be believed that the minimum Bank rate being more than about 4 per cent., all speculation would be stopped, and a period of depression would prevail. Capitalists are now learning to look upon 10 per cent. as an amount of dividend generally to be expected, whilst 20 per cent. at least must be earned for them, or they seem scarcely inclined to give directors the usual complimentary vote of thanks.

At the present moment an extraordinary amount of public attention is directed to the several financial associations which have within the past few months been introduced to the notice of capitalists, and no one would attempt to deny they are highly desirable channel for investment; indeed, the enormous profits which they have earned is alone sufficient evidence in their favour. It has been proved beyond dispute that upon the capital employed by these undertakings profits varying from 18½ per cent. per annum to 73 per cent. per annum have been earned, and the directors of the unfortunate (?) association which earned only 18½ per cent., absolutely apologise for being unable to show a more favourable result, and give ample explanations to prove that it was only owing to most unusual difficulties, not likely to occur again, that this percentage of profit was not much exceeded. Now, the announcement of such facts, and the declaration of the dividends available for distribution as a dividend of so much per cent. per annum, has startled—and very satisfactorily startled—capitalists to the fact that joint-stock enterprise is not amongst the least profitable channels for the investment of their spare funds.

But large as have been the profits of financial associations, it would be difficult to show that in mines profits are both earned and paid at so far higher a percentage rate, that any increased risk, real or supposed, connected with mining operations is far more than compensated for. The fact of dividends on mine shares being distributed, as a rule, two-monthly, and at so much per share instead of so much per cent., leads mine adventurers to receive 20, 30, 50, or even 150 per cent. per annum, without noticing it as extraordinary, and we could mention a great number of mines, which have long since ceased to be in any degree speculative, returning regularly and continuously, dividends which would bear no unfavourable comparison even with the immensely profitable financial associations. We will subjoin a list of 20 mines which actually distribute to the shareholders dividends averaging 40½ per cent. per annum upon the outlay made in the development of the mines, a percentage with which surely all reasonable speculators will be well satisfied. We will not include in this list the exceptional rich mines which have returned over 100 per cent. per annum, for it must be acknowledged that it would be presenting mining enterprise in too glowing colours to give as an average of the whole the annual profit of such undertakings as Wheal Grylls, where over 136 per cent. per annum was paid as dividends in 1863; as Lisburne Mines, which gave more than 128 per cent. per annum; Minera, 116; East Caradon, 121; Polberro, 133; East Pool, 125; South Cadron, 2360; and Devon Great Consols, 5500 per cent. per annum, although such mines would doubtless have to be included were a general statement of the profits of mines required to be prepared. The present purpose will be best answered, however, by taking only some of those mines not usually alluded to as being extraordinarily profitable, as by that means the objection that only the most productive mines have been selected cannot be urged. Many of the mines contained in the subjoined list are comparatively little sought after by capitalists, the majority of whom have not troubled themselves to calculate the profits returned by them:

Name of mine	Capital paid up per share	Dividend paid per share, 1863.	Profit per cent. on outlay.
Bottaback	£91 5 0	£24 0 0	26½
Cargoll	14 15 7	5 0	34½
Cwm Ern	7 10 0	2 5 0	30
Cwmystwith	60 0 0	20 0	33½
Dolcoath	128 17 6	47 0 0	36½
East Bassett	29 10 0	10 0	33½
East Darren	32 0 0	11 0	34½
Herodstow	8 10 0	5 5	61½
North Treskerby	1 9 0	0 7 6	24½
South Frances	18 18 9	6 6	33½
St. Ives Consols	8 0 0	2 17 6	35½
Tincroft	9 0 0	2 10 0	27½
West Bassett	1 10 0	1 7 0	90
West Seton	47 0 0	29 0	61½
Wheal Bassett	5 2 6	4 0	75
Wheal Bassett & Grylls	7 0 0	3 0	42½
Wheal Kitty (Lelant)	2 0 0	0 10 0	50
Wheal Owles	70 0 0	22 10 0	32
Wheal Trelewney	5 10 0	2 2 6	38½

In calculating the annual percentage, fractions less than eighths of a pound have been omitted, the actual percentage being in all cases either the same or above that shown in the table; and we have no hesitation in saying that there is no class of commercial business where a selection of twenty second-class companies engaged in it (for the financial associations must rather be classed with the exceptionally profitable mines not contained in the table) could be made which would show equally profitable results. Let capitalists, then, give the financial associations all the credit for making large profits to which they were entitled, but let them well understand that carefully-selected mines are fully able to hold their own against them, and that the prospects of mines and of the metal trades generally were never in a more healthy and prosperous condition than at present.

Montreal, described how forcibly he was struck by the marked difference existing between the Canadians and the Americans, both Federals and Confederates; nor did he fail to express his surprise that, in reality, so little is known amongst the good people at home of their colonial relations. The farther the distance the closer the tie would seem to apply to the loyalty of Canada in a very eminent degree, for the popular sympathies are truly and enthusiastically British. And this, we repeat, is not the least attractive merit by which all who are willing to enter upon colonial projects, should be influenced. Those tendencies incline to and give association stability; and it is evident that industrial intercourse, of which there cannot be a better type than mining, for it is ever extending its sphere, and creating new issues of commerce and manufacture, will still further improve those kindly, elevating susceptibilities, and through a union of industry, consolidate the interests of all engaged in it. A great advantage, then, is apparent in the certainty that, whatever combination of a speculative nature is formed in this country for mine-working in Canada, the projects will not be launched in a region foreign to English principles, habits of thought and action, mutuality of consideration, and business fair-play, by which so much of our common weal has been, and ever will be, effected.

Iron, vast as has hitherto been its uses, is day after day increasing its application and extending its range of utility. Its facture into steel bids fair to engage in its still greater improvement all the science and ability which can be mustered, for it being now so largely introduced into the construction of projectiles, missiles, shield-armoury, and so forth, it will inevitably be tested in various other departments of what may be termed the science defensive and offensive of modern times, while for such purposes there will be demanded perfection and modifications which will, doubtless, be indicated by the incidents of requirement; and all these must in their turn give an impetus to the exploration of iron mines, and enhance the value of the best material. In Canada East a mineral property of this character is reported, and some tons of the ore have been brought to London, with the intent of putting its qualities to the proof upon a large scale. For conversion into steel of a peculiarly fine description it is said to be thoroughly adaptable, but of this it would be premature to speak definitely. A report upon it will be, it is understood, published in due time.

An analysis of the ore shows very favourable to such an estimate, and as it is asserted to be cheaply procurable, and that the concession is conveniently placed, of large extent, and granted in perpetuity, the interest to its possessors seems apparent. However, it is not our province to enter upon such speculative details. The subject is touched upon the general principle of encouraging legitimate mining enterprise in the colonies, particularly one like Canada, where the regard for constitutional government is so marked, the order of the community so firmly established, and industry and commerce the basis of public prosperity.

In another column of this day's Journal we give a report of the proceedings at the meeting of the South Wales Institute of Engineers, which will be read with much interest by all connected with the Principality, for it will be seen from the President's inaugural address that the suggestion recently made in the MINING JOURNAL, that the operations of the Institute should be extended to metalliferous as well as coal mines, has been willingly adopted, the President expressing the wish that gentlemen who have had experience in the working of some of the lead and other metal mines in South Wales would favour them with a paper. Another important point to which allusion was made in the address was the award of prizes and distinctions for papers which the Council consider to be of sufficient merit—a course which, we fully agree with the President, would create a wholesome ambition and competition on the part of the members.

COAL-CUTTING MACHINERY.—A bill in Chancery was filed on Jan. 30, by Messrs. Firth, Donisthorpe, and Bower, of the West Ardsley Colliery, Leeds, against Messrs. Ridley and Jones, the patentees of the alleged improvements upon the invention of the said Ridley, previously assigned to the plaintiffs. Messrs. Ridley and Rothery obtained provisional protection for an invention on March 30, 1861, and before the patent was completed (on June 27, 1861), entered into an agreement, of which the following is an abstract:—1. The patent for coal-getting, obtained in names of Ridley and Rothery, when completed, to be transferred to Mr. G. E. Donisthorpe (on behalf of Donisthorpe and Firth).—2. All expenses then already disbursed by Ridley and Rothery, and also accounts yet remaining unpaid, not exceeding £50., to be paid by Donisthorpe and Firth, and also all further expenses in obtaining the patent.—3. Future improvements or patents for coal working, invented or patented by Donisthorpe, Ridley, Rothery, or Firth, to become the property of the said G. E. Donisthorpe; and in consideration of these arrangements he is to pay to Ridley 15 per cent., and to Rothery 5 per cent. of all profits which he may make out of the said patent or patents or future improvements, in addition to the wages or salary of £1. net per week to said Ridley.—4. Profits on foreign patents to be also liable to the 15 and 5 per cent. respectively.—5. Ridley to give the whole of his time, and follow in all cases Donisthorpe's instructions.—6. No charge to be made on the West Ardsley Company for the use of the machines, but such company to have free use of the patent machines on payment of cost of manufacture.—7. Ridley and Rothery to be exempt from all expenses and losses in obtaining and defending patents. The memorandum of agreement referred to above has been registered in the register of proprietors, kept at the Great Seal Patent Office, pursuant to the Act. Improvements on the original patent were patented by Donisthorpe, Firth, and Ridley, in November, 1861. On May 29, 1863, Ridley abruptly left the service of the plaintiffs, of his own accord, and without giving any warning. On June 8, 1863, a patent was obtained by James Grafton Jones and Robert Ridley, for an invention of a coal-cutting machine, differing from the West Ardsley machine in the form of the cylinder—the West Ardsley machine having an ordinary high-pressure cylinder, and Ridley and Jones's improvement a trunk-engine cylinder. The prayer of the bill is:—1. To compel Ridley to specifically perform the agreement of June 27, 1861.—2. To compel Ridley to assign to Donisthorpe or the plaintiffs (subject to the said agreement) all his share and interest in the patents of Ridley and Rothery, Donisthorpe, Firth, and Ridley, and Jones and Ridley.—3. That Ridley may be declared a trustee for Donisthorpe.—4. That Ridley and Jones be restrained by injunction from using the patents of 1861, without Donisthorpe's license.—5. That the machine exhibited at Middleton's yard, Southwark, and all other machines made or in the power of Ridley and Jones, be handed over to the plaintiffs.—6 and 7. That damages and costs be assessed against Ridley and Jones.—8. That the plaintiffs may have such further relief as may seem fit.

TAMAR, KIT HILL, AND CALLINGTON RAILWAY.—This project passed unopposed before the Examiner on Standing Orders on Wednesday last. All the requirements of Parliament had been most accurately complied with, so that the necessary evidence was furnished without the slightest break. This is essentially a mineral line in a most important mining district, and must be great advantage to the numerous undertakings in the neighbourhood; it is seven and a quarter miles long. About five miles of the land has already been purchased, and about three miles of the line is ready for the rails. It will be opened for general traffic, it is expected, about the beginning of September.

THE WEST CLIFFORD UNITED TIN AND COPPER MINING COMPANY.—The prospectus of this undertaking, which appears in the Journal of this day, cannot fail to command attention, as possessing very attractive advantages, verified and supported by parties largely interested in many of the surrounding rich and profitable mines, and who are not likely to be found burrowing where metal is not to be found or lodes to be traced. The West Clifford embraces four distinct sets—the Ting Tang, West Ting Tang, South Ting Tang, and Wheal Moyle, all in the Gwennap district, the richest in the county of Cornwall, where the fortunate adventurers have counted their profits by millions. A perusal of the reports in the prospectus, all from practical men of much experience, will show that a large amount of work, of great value to the present company, has been done; that the mine is opened down to 140 fms., nearly reaching that point where the greatest riches have been made by the mines in the locality—from 150 to 250 fms.; it will also be found that all the reports agree in this, that the lodes of the Clifford Amalgamated (now the richest mine in the district) run direct through the West Clifford property; these facts give a certain value to this undertaking. But there is another feature in the concern which should be noticed, because the principle has been advocated for years, that a part of the directors in mining companies should be Cornishmen, resident in the locality. Now, it so happens that four of the directors of the West Clifford Company are gentlemen in the county of the highest standing, all con-

nected with mining; this, therefore, may be considered an additional guarantee for a sound and judicious management. The capital of the company is very ample—30,000L, in 6000 shares, of 5L each.

FOREIGN MINING AND METALLURGY.

A few data with respect to the present position and prospects of the coal basin of the Ruhr may not be unacceptable. The basin extends from the Rhine to the Ruhr, passing by the districts of Duisburg, Essen, Bochum, and Dortmund. The basin, which was unknown—or, at any rate, ignored—15 or 20 years since, is now worked to a great extent. Up to 1853, the basin, deprived of the means of communication so indispensable necessary for stimulating the working of a coal bearing, was obliged to reduce its extraction to the mediocre quantities necessary to meet the wants of domestic consumption in immediately contiguous districts, while a timid export trade was attempted to Holland. Nevertheless, notwithstanding these disadvantages, which exercised to some extent a paralysing influence, the extraction constantly increased. Thus, while in 1853 it amounted to 166,560 tons, in 1852 it had risen to 195,590 tons. The year 1853 was the commencement of a new era for the basin, in consequence of the opening of direct railway communication between Paris and Berlin. From that date there began to rise on all sides in the district blast-furnaces, forges, glass-works, steam-engine manufacturers, and industrial establishments of all kinds, so that the extraction of coal acquired a development which has not ceased to increase from year to year. Thus while in 1852 the amount raised was 195,590 tons, it had increased in 1854 to 271,580 tons, and in 1855 to 548,500 tons. It may be anticipated that this progress in production will be still constant and continuous, as the situation of the basin assures its productive outlets of a great and valuable extent. Placed in the centre of Europe, and endowed now with economic means of transport, the basin can, over an immense extent, defy the competition of the coal of any other locality; in fact, of late Ruhr coal has been seen at Gand in competition with Belgian, and at Calais in antagonism with English. The conditions of extraction are also very favourable. The whole of the beds in the basin form a thickness of more than 140 ft. of coal, of an altogether special quality for gas and coking purposes; and it is obvious that this immense mass of minerals could meet the requirements of a very large demand for an almost indefinite period. The power of the Ruhr beds, on an average, 4 ft. 8 in. to 6 ft. 8 in., but they sometimes extend to 10 ft. and 13 ft. in thickness. The coal is generally only sufficiently pure to be classed as *meun*, which serves for the fabrication of coke. Beds of 2 ft. to 2 ft. 8 in. in thickness, or even 3 ft. 4 in., which in Belgium and the North of France are considered very fine workings, are objects of disdain in the basin of the Ruhr, forming a reserve for the future,—a future which appears very distant, having regard to the richness of the basin. In Belgium the working is conducted in pits sunk in some cases to a depth of 2870 ft., while in the basin of the Ruhr the maximum depth of the pits is only 800 ft.

The suppression of any condition as to a guarantee is now a clause frequently insisted on in Belgium in contracts for rails. This is a custom, in fact, which tends to become general, and the matter is an important one in connection with contracts concluded on foreign account, as producers were formerly exposed to the risk of seeing their rails rejected in distant districts, often for very slight defects. Hopes are entertained that a guarantee clause will in the end completely disappear from contracts. Several new contracts concluded with England, and amongst others by MM. de Dorlodot Frères, have suppressed all guarantees as to time of delivery. There is little novelty to report in connection with the Belgian market. The rise declined on some days since, in consequence of a similar movement in England, has found purchasers well disposed to accept it, and orders have not fallen off in consequence. On the contrary, forgers are amply provided with orders, and they feel a firm confidence that Belgian siderurgy is about to enter on a period of activity; the consequence is that establishments are increasing their means of production, while new works are being constructed. It may be interesting to notice some of the changes which are being effected. Thus, the Ougrée ironworks have put in operation a rolling-mill for heavy plates and construction irons, and the managers are also occupied with the construction of additional puddling-furnaces, &c. The establishment of works for the production of rough iron is announced at Jennepeau. The Couillet Company has decided on increasing its rolling-mills, which are already on a vast scale, and the construction of five new puddling-furnaces, four re-heating furnaces, a pile-hammer, &c., has been commenced. The Marcinelle blast furnace will be soon re-lighted. Its new management by MM. Cornill et Cie, the Châtelineau Company and MM. de Dorlodot have taken similar resolutions to extend their productive powers. We have announced recently the putting in train of a rolling-mill constructed at Charleroi by a new firm, MM. Victor Gilleux et Cie; this establishment will produce specially plates and angle irons, &c., for bridges. The works, which have been fitted up in a very elaborate and complete manner, are expected to introduce some improvements in the fabrication of plates for boilers. The works will also apply themselves to the fabrication of plates for ships; this is a branch of siderurgy which must evidently develop itself at a time when efforts are being everywhere made to replace wood by iron in naval constructions. A meeting of firms engaged in small forging operations just held at Charleroi, has decided on the maintenance for the time of present quotations, in order that a rise may be secured shortly. This opinion only prevailed after various observations from some individuals, who wished to reduce sale prices at a time when raw materials must be obtained at higher rates. It is clear that these firms should endeavour, as some few of them only do, to extend their sale radius, which is now restricted to Belgium, and to a few timid export operations—in a word, they must frankly open the international market. The syndicate of works has concluded a fresh contract for rails of a certain importance for America, on very favourable conditions, and without guarantee. The current of affairs with England appears likely to acquire a considerable extension. A quotation of 61. 16s. for No. 1 of the first class of rolled irons becomes more and more general at Charleroi, especially since producers have a certainty that the Liège basin proceeds *paris partis* with them in the upward movement. Notwithstanding this elevation in prices, affairs are easy and abundant. The market for pig preserves the same characteristics; since the revival in business there has been a rise of 6s. 3d. per ton in casting and 3s. per ton in refining. The advance has thus been much stronger in iron than in pig; but it should be remembered that the price of pig had not previously given way in the same hettcher-skelet fashion as that of rolled iron. The navigations have been resumed on the rivers and canals. During the late cold weather good orders for coal came forward, and the considerable stock which had accumulated is now expected to be promptly run off; exporters are calculating on a good season, but no change in prices is proposed.

The market for copper has been quiet at Paris. English has made 114L to 114. 10s.; United States, 120L; and Chilean, 104L to 105L. No transaction has been reported at Havre; the arrival at that port of important quantities sold to be delivered subsequently appears to have suspended for the moment transactions in Chilean, the price of which is maintained, nevertheless, 104L. The copper of the Society of Commerce has been dealt in at 61Ls.; at this quotation there still remained sellers. In consequence of the rise in England the price of the various qualities of copper has generally risen at Hamburg; supplies are nearly exhausted, and it is now only possible to obtain copper derived from founders in the town. The Berlin and Cologne markets have been regular, and previous rates have been firmly maintained. Banca tin remains quiet, and without much business, at Amsterdam and Rotterdam, at 72Ls. At Paris tin is less sought after, but at the same time previous prices are maintained. Banca was quoted at 128L; Detroit, 128L; and English, 120L. There has been no change at Berlin and Cologne, where the article enjoys a good demand for consumption. Tin is firmly held at Hamburg, but there has not been much business done in it. Lead has been in good demand at Paris, and the price of rough Spanish has been raised from 11s. 14s. to 22Ls. 4s. and 22Ls. 8s. per ton, while French has also brought 22Ls. 8s. per ton. There is no great demand for the moment at lead at Hamburg, but the article remains in a good position, in consequence of the absence of stock. Berlin has been very firm; holders maintain their pretensions, and will not cede anything below the previously established prices. Former rates have also been supported at Cologne. Rough Silesian zinc has displayed an upward tendency at Paris, and is quoted at 22Ls. while rolled zinc of the Vieille-Montagne Company has made 25L at the same capital. Affairs have been almost *nil* at Hamburg, and prices appear to be the turn in favour of buyers. The demand has fallen off at Breslau, but a notable part of the production up to the end of February being already sold, holders are very firm.

The situation of the French iron market remains, on the whole, unaltered. Transactions in pig, however, which previously were very quiet, have become more animated of late. Some considerable affairs have been carried through, the price of 4L. 16s. per ton has been abandoned by sellers at St. Dizier, and business cannot now be done at less than 5L per ton. It is remarked that only certain buyers have participated in recent transactions, the others holding aloof. The market for iron is less active. The works have their fabrication disposable, but no important stock exists at present; and a good command of the year is hoped for, even on the confession of those who consider the iron trade of France as scarcely able to sustain itself. A letter just addressed to the Minister of Agriculture, Commerce, and Public Works, by the committee of coal-owners in the Pas-de-Calais, states, among other matters, that the coal basin of the Loire now yields annually 2,400,000 tons per annum, while after only a few years' work the production of the basin of the Pas-de-Calais already nearly attains half this total, and is acquiring every day a further development. A discussion of some interest has been carried on of late with reference to the present position of French metallurgy. The *Revue de Charleroi* sums up matters as follows:—

"We have already said that the journals which occupy themselves specially with the interests of metallurgy in France show themselves very uneasy at the fact that it does not participate in common with Belgian and English siderurgy in the marked revival which has declared itself for some months in Belgium and England, and they attribute this fact to the reduction of Customs' duties involved by the recent Treaties of Commerce. We have intimated on this subject to the *Journal des Mines* that we cannot share its opinion, and that the cause of the evil of which it complains does not proceed from a Customs' reduction. Our words have not had the good fortune entirely to convince the French journal; nevertheless, it seems to us that they have thrown some doubt into the minds of its director, as it at least no longer asks for the restoration of the old protective tariff as a means of saving French metallurgy, but calls upon the French Government for an application of economic measures capable of lightening the burthen and ameliorating the conditions of French industry. One observation which we have to make to the *Journal des Mines* is, that we heard Belgian forge-masters complain at least as loudly when the first reforms were introduced into our Customs' tariff. It was then contended that Belgian forging industry would become the prey of England. All these apprehensions have been dissipated little by little in Belgium, but now the same event produces the same impression in the minds of French industrialists; we believe the fears entertained by them are no better founded than were those cherished by our own countrymen."

We may group together one or two other matters of interest. The Niederschlebach Mines and Foundries Company returns its production for the fourth quarter of 1863 as follows:—Mines: Concordia, plumbiferous minerals, 290 tons; Zeus, ditto, 741 tons; Wüstseiffen, ditto, 646 tons; Fischbachwärter, ditto, 54 tons; Rother-Adler, iron minerals and copper pyrites, 921 tons; Oberstaedt, ditto, 79 tons; total, 9130 tons. In the reduction-furnace of the lead and silver works the administration obtained during the quarter 263 tons of lead, and the process of desilverisation furnished to commerce 309 tons of refined lead, 39 tons of refined litharge, and 0.467 ton of fine silver. The Belgian Government, by a decree dated Jan. 22, 1864, has approved the statutes of the Société Anonyme Houillère de Santa Ana, the principal object of which is the working of a powerful coal deposit near Oviedo, in the Asturias (Spain). The company is also authorised to undertake everything relating to iron industry (the district presenting important bearings of ironstone), as well as the construction of railway plant. Before issuing the recent decree the Belgian Government instructed one of its staff of engineers of mines to report as to the reality and importance of the coal beds with which the company proposes to deal; and that gentleman, in his report, states that the principal mines belonging to the new undertaking are those designated under the names of Juliana, Santa Ana, Prisionera, Ade-

laida, Casona, Yusita, Soto Salossa, and Gondra; while there are, besides, several others which are only known by works of little extent, but the importance of which cannot be denied. "The union of all these mines," adds the report, "constitutes a certain mineral wealth."

REPORT FROM NORTHUMBERLAND AND DURHAM.

Feb. 4.—The Coal and other staple trades of the district continue satisfactory, on the whole. The iron trade, though good, can scarcely be said to be so very active as of late; a lull has evidently occurred; this, however, may only be temporary. What the effect of the war may be which has just broken out is difficult to predict; but the effect on the general trade of the district, including manufactures of all kinds, can hardly fail to be prejudicial. But, at the same time, it seems quite possible that, so far as the coal and iron trades are concerned, the reverse may be the case. During the Crimean war the demand for coal was most active, and very high prices were realised for steam coal especially. It appears, therefore, to be quite possible that the district may not suffer so much from the war as might at first be feared. The colliers in the district are generally in a rather excited state. Although "peace" has at length been restored, and full work will now very shortly be reached at Brancepath, the men at various works are making demands for advanced prices. The approach of the yearly "bindings," which take place on or about March 22, causes some excitement, especially as the men have lately expressed an opinion adverse to these yearly agreements. Only a part of the colliers in the district work on this system, so that the question only affects that portion; it is, therefore, to be expected that some excitement will exist until the question of the yearly bonds has been decided. It is said that some misunderstanding has taken place between the miners and the owners at the extensive coal works of Messrs. Pease, in the West Auckland district, and that a strike there is not unlikely to take place. We, however, think that the men, after the experience they have just had of the effect of those things, will not blindly or rashly take such an extreme course. Whatever may be the cause of the misunderstanding, they will, we have no doubt, hesitate before following the course indicated, and give the matter due consideration.

The new mode of preparing cast metal tubing for the purpose of insertion in upset shafts, &c., has been adopted by Mr. Gibson, engineer at the Ryhope Colliery, near Sunderland. Various modes of preventing the rapid corrosion which takes place in shafts of metal tub have been proposed and tried. The most usual mode adopted is to case the inside of the tubing by means of fire-brick, which is walled up in flanges prepared for the purpose. A process has also been tried by which the metal tub is coated by a thin covering of enamel, or potters' fine glaze; but this will be discarded on account of the great cost. The process adopted by Mr. Gibson consists in "chilling" the metal segments, in a similar manner to that adopted in "chilling" wheels—the segment when hot from the casting being fitted into a pan for that purpose. The effect is that the segment is case-hardened to a certain depth of the metal. One we noticed was hardened to a depth of 7-16th of an inch, the total thickness of the metal being 1*1/4* in. The idea, we believe, is quite original; and the metal casing so formed must be an immense improvement on the old method, as in the latter case the metal was so very soft as to be easily acted upon by the gases in the shafts, and seriously injured in a comparatively short time. This, however, will be almost entirely obviated by the invention of Mr. Gibson.

[There was appended to our last week's letter a brief notice, by a correspondent, of Messrs. Palmer and Co.'s letter to Mr. Doubleday, respecting the experiments made by them with the Hartley and Welsh steam coal, and also some remarks thereon. With the views there expressed we do not agree; we do not believe that the statement given by them contains any exaggeration, but on the contrary, that the results are there accurately given. With respect to the relative value of Hartley and Welsh steam coal, we have always contended for the superiority of the former, and as yet have seen no sufficient reasons to change our views. The question, so far as we are aware, remains yet to be settled, unless the late experiments instituted by the Government are considered conclusive; but we can only judge of this when the results are published *in extenso*, which, it is hoped, will shortly be done.]

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 4.—The Iron Trade in both the great districts of Staffordshire is in a position which renders it rather difficult to speak of it with confidence. Large orders were given out at the close of last quarter and the commencement of the present one, and the leading manufacturers have plenty to do. Fresh orders are not coming in rapidly as yet, but from the United States and Canada there is good demand, and it is stated that the great buyers cannot get orders taken for early completion in Wales or the North. The smaller makers are in some cases getting their specifications pretty well worked off, and are looking out for new contracts. Pig-Iron is not altered in price, except that a few makers who are compelled to sell are taking rather less than they were a month ago, and in some cases persons who bought largely at the lower prices, previous to the late advances, are securing a fair profit by re-selling rather below the makers' rates. It is a question of great interest what influence the war on the Eider will exercise on the trade. Coal keeps very dear, and ironmasters grumble greatly at the poor stuff they receive, and the enormous price they pay. A great quantity of coke comes from Wales, Derbyshire, and Lancashire, and the price of this article has not risen in proportion to that of coal. A strike of the colliers of Messrs. G. B. Thorneycroft and Co., at Bradley, near Bilston, has resulted in their demand being acceded to. When the last advance was made in the price of iron it was agreed to raise the wages of these men 3d. per day, but they demanded 6d., which is now conceded, making their wages 3s. 6d. per day's stent. This advance will apply, no doubt, to all the collieries in the Bradley district, where thick and thin coal lie in the same field. The nail manufacturers about Dudley have agreed again to advance wages at from 10 per cent. downwards. At the North-Western Railway Company's Works, at Crewe, the puddlers are still out on strike. They demand 11s. 6d. per ton; they have been offered 11s., but refused to accept it.

At the meeting of the Fenton Improvement Commissioners, on Tuesday, the question of the appropriation of the 125L to which the district of Mr. Wynne, Government Inspector, is entitled from the surplus of the Hartley Fund was mentioned. The Chief Bailiff, Mr. Higginbottom, said, as has often been urged in this letter, that he did not think the money would be of much service to the districts unless it could be made a sort of nucleus

securing the development of their works, which only a short time ago seemed to be "hanging fire" for want of capital. The directors, however, have taken the bull by the horns, and have faced their difficulties boldly. They had so much water to contend with, that their original estimated capital has been exhausted. They had a valuation made of the property, which showed that, besides what they had expended, there were assets amounting to upwards of £20,000; the result was that the company obtained another £10,000, to complete their works. The colliery in Brampton, Derbyshire, which was formerly opened by Messrs. Nichols and Fletcher, has been sold to a limited liability company, who contemplate greatly extending the works. They have already purchased the colliery belonging to Messrs. Swallow, and it is intended to construct a mineral railway from the works to the Wingerworth siding, which is not two miles in extent, and the making of which would not be attended with a very large outlay of capital. It would greatly facilitate the transit of coal, which are the Silurian bed, and would also materially cheapen the cost. Messrs. Barber, Walker, and Co., coalmasters, of Eastwood, have recovered £4000 against the Nottingham Canal Company, for damages sustained by them by the leakage of the canal into their coal mine.

REPORT FROM MONMOUTH AND SOUTH WALES.

FEB. 5.—The Iron and Coal Trades remain without any very important alteration since my last report. The books of the ironmasters are well filled with orders, and the current prices are maintained with firmness. The quotations for coal are going up, and there is every probability of another considerable advance in price before long. Tin-plates are in fair request, and there is an average business doing. The Pembrokeshire Iron and Coal Company are about to place their furnaces at Kilgetty in blast again. The make of these furnaces stood high in the market formerly for tin-plates, sheets, and cable-iron.

The Bristol and South Wales Railway Wagon Company half-yearly meeting, on Monday, passed off far quieter than was expected, no reference being made to the disputes with the promoters of the new company. A dividend at the rate of 10 per cent, per annum was declared for the half-year, and a further sum of £250,000, or about 1½ per cent, per annum, was divided as a bonus among the shareholders. Mr. Stock brought before the meeting the desirability of increasing the number of directors, and he proposed that Mr. C. H. Hewitt and Mr. Thomas Gibson should be elected on the board; this was seconded by Mr. Handel Cosham, and unanimously agreed to. A company has been projected with the view of constructing docks at New Milford, or better known, perhaps, as Neyland, the terminus of the Great Western on the west coast. The estimate cost of construction is about £200,000. The principal promoters are London capitalists, and it appears that a large amount of the capital has been already subscribed for.

The Temperance Hall, Tredegar, was again crowded on Friday, to hear the decision in the case of John Curley, who was charged with leaving the employment of Messrs. Levick and Simpson, Blaina, without having given the usual notice. Brief details of the case were given in last week's Journal, the defendant being one of the colliers on strike at Blaina. The Rev. E. Leigh, the magistrate who sat on the occasion, said he had carefully considered the evidence, and he had come to the conclusion that Curley had left without just cause, and without giving even the requisite notice, and for this offence he would be committed for one day. The defendant having already been more than one day in the custody of the police, he was at once discharged. Attempts are being made to enlist members for the Miners' Union in this district, but it is evident, from the small number that have joined, that the colliers and miners of South Wales, or, at least, the great majority of them, look with favour upon the preferred Union. The cause of this apathy may be easily explained, from the fact that all such unions or combinations have always done more mischief than good, and, as a rule, the men have had to suffer in the end, because they have connected themselves with the movement. It is not surprising, that the Union has met with so cold a reception.

The directorate of the Bank of Wales has been further strengthened by the election of Mr. Sheriff Caveron to the board.

The case of Thomas Thomas, Mynddyslwyn, colliery proprietor, came again before the Bristol Bankruptcy Court, on Tuesday. Mr. Press said that on the last occasion he applied for an adjournment for six months, but Mr. Brittan, who appeared for the bankrupt, urged that it should be for three, and his Honour then said that if any further time were required, it should be recollect that the original application was for twelve months. It had so happened, however, that the memorandum of adjournment was drawn up through the mistake of all parties, for two months, and he now applied for a further adjournment to the time first proposed—six months. His Honour said he forgot what was the object of the adjournment. Mr. Press said it was to enable his clients to prosecute enquires as to certain mortgage transactions of the bankrupt. Mr. Blakey said his Honour would remember that the assignees expressed an opinion that these enquiries would lead to no beneficial result to the creditors or Mr. Press' clients. If there were to be another adjournment, it might as well be for six months, with the question of costs reserved. Mr. Press quite understood that the question of costs was reserved, and added that he might have to apply for costs. The case was then adjourned to the 7th of June.

SOUTH WALES INSTITUTE OF ENGINEERS.

The general meeting of members was held at the Castle Hotel Assembly Room, Merthyr, on Wednesday, when there were present—Mr. A. Bassett (President); Mr. W. Menclaus (Vice-President); Mr. W. Adams, Ebbw Vale; Mr. Cox, Ebbw Vale; Mr. Phineas James, Ebbw Vale; Mr. Gwyllim Williams, Mr. J. Williams, Lletty Shenkin; Mr. Maynard, Crumlin; Mr. Matravers, engineer, Blackfriars Bridge; Mr. Thomas Evans, Government Inspector of Mines for South Wales district; Mr. J. James, Newbridge; Mr. E. Bridgen; Mr. C. A. Harrison, New Tredegar; Mr. G. Wilkinson, Aberdare Valley; Mr. J. Naysmith, Aheraman; Mr. W. B. Bryant, Bridgend; Mr. George Martin; Mr. George Brown, Mountain Ash, &c.

Amongst the diagrams, plans, and specimens exhibited in the room were the following:—Wishaw Coal Fields, showing sub-division into lots; Scottish Coal Measures, from the North of Fife; plan of Merthyr Pit Workings; and Scotch Coal Measures, by Mr. Ralph Moore; also, plan of Long Wall Working; and Long Wall Working at Lletty Shenkin Colliery, by Mr. John Williams; specimens of Drilling and Punching Work used in connecting the different parts of the new Blackfriars Bridge, in course of construction at Crumlin Works; also, several diagrams, showing the mode adopted in preparing Drill Work at Crumlin, and illustrative of the paper read by Mr. Maynard, on Multiple Drilling for riveted boilers, girders, &c.

Mr. BRIDGEN (the secretary *pro tem.*) read the minutes of the last meeting, which were unanimously confirmed.

The PRESIDENT then read his opening address, as follows:—In occupying the Presidential chair for the first time, I beg to return to you my sincere thanks for the honour you have conferred upon me in electing me your President for this year. I have not accepted the office without some little hesitation, knowing the responsible duties that must be discharged in connection with it; and having a jealous wish that an institution which has been commenced and carried on during the last six years under such bright auspices should in no way retrograde during my year of office. But, feeling convinced that I shall receive from its members the invariable support that at all times has been given to my predecessors, I undertake office of President with much pleasure, and I beg to assure you that I shall deem it a great privilege to be enabled in any way to further the objects of a society that bids fair to become, in time, one of the most important institutions in the country. And it must be a source of sincere gratification to the original promoters to witness the very great success that has resulted from their efforts. If we institute a comparison of the progress of this institution with others of a similar character, having the same objects in view, and in connection with engineering science, we find that we are by no means placing ourselves in an unfavourable position. The Institution of Civil Engineers, which ranks as the first society of the present day in connection with engineering science, was once of a very humble origin, but has now enrolled amongst its members men of the very highest scientific acquirements, and acknowledged reputation, in their profession; and it must be most encouraging to the members of other institutions to find to what a degree of usefulness and celebrity this institution has now attained. The origin of this institution is very interesting, for we find about the year 1816 Mr. Henry Robinson Palmer, who was then articled to Mr. Bryan Donkin, suggested to Mr. Joshua Field the idea of forming a society of young engineers, for their mutual improvement in mechanical and engineering science. The earliest members were—Mr. Palmer, Mr. Field, Mr. W. N. Maudslay, Mr. J. Jones, Mr. Charles Collings, and Mr. James Ashwell. This society was originally constituted on Feb. 2, 1818; these gentlemen were afterwards joined by Mr. Thomas Maudslay and Mr. John T. Lethbridge; in the year 1819 this number was increased to eleven. In the following year (1820) Mr. Telford was formally installed President, having been memorialised by the six gentlemen who originated the society to accept that office, as they felt convinced that Mr. Telford would take an interest in the institution it could not fail to be successful with so eminent an engineer in the chair; this proved to be the case, for in that year 32 new members were elected, and when the institution had been in existence five years, there had been 54 elections. Mr. Telford continued President until his death, which took place on Sept. 2, 1834; at this date there were 200 members. The late Mr. James Walker was elected President, and occupied the chair until Jan. 1845, after which the chair was taken by Mr. John Rennie, and has been successively filled by Mr. Joshua Field, Sir William Cubitt, Mr. James Meadows Rendel, Mr. James Simpson, Mr. Robert Stephenson, M.P.; Mr. Joseph Locke, M.P.; Mr. George Parker Bidder, and now by Mr. John Hawkshaw, each gentleman holding the office of President for two years. In the ordinary course of rotation, Mr. I. K. Brunel should have succeeded Mr. Stephenson, but he requested that he might not be put into nomination, owing to a pressure of business and ill-health. The number of subscribing members of all classes on the books at the close of the last year was as follows:—Honorary members, 18; members, 425; associates, 188; graduates, 9; making a total of 1040. The Institution of Mechanical Engineers was established in 1847—the present number of subscribing members is 550. The North of England Institution of Mining Engineers was established in 1852, under the presidency of Mr. Nicholas Wood. The number of subscribing members now amount to 200. The South Wales Institution of Engineers was established in Oct., 1857, at Merthyr, under the presidency of Mr. Menclaus, and has just entered upon its seventh year, during which period nineteen meetings have been held at Merthyr, Cardiff, Newport, and Swansea; seventy-one papers have been read, discussed, and circulated. The number of subscribing members up to the close of last year were 170. There were also seven more members proposed last meeting. That these institutions, in their different spheres, have had a most beneficial influence not only upon members, but upon all classes in connection with the commerce of this country, I conceive, for an instant questioned. It is true papers are fully and fairly discussed, containing well-defined schemes and arguments, having for their object either economy in the cost of the production of the raw materials, or improvements in the mode of conversion, or, indeed, any other subject bearing upon the improvement or economy in the mining or manufacturing operations of the district; and the views of practical men, well qualified to express sound and safe opinions on the subjects under consideration, are elicited, that such discussions cannot fail to be productive of great good, and the means of obtaining a vast amount of practical and valuable information, which, probably, would remain dormant, unless an opportunity presented itself of facilitating an interchange of ideas, and which can only effectually be accomplished by the establishment of institutions of this kind, when discussions form an important element of the objects of the society: and as this district is rapidly developing its resources in a ratio probably unparalleled in the history of commercial enterprise, so I trust it will be found that this institution will continue not only to increase in the number of its members, but that the papers contributed will be marked by their practical and useful character, and the discussions will also amply testify the care and consideration that has been

given to the subject, and that they will at all times be conducted in that temperate and cautious manner that cannot fail to carry with them additional weight, so that ultimately this institution will occupy a position amongst the scientific societies of this country, that I think and believe it is fairly entitled to expect. To those members who have not already favoured this institution with any original communication, I would beg to ask them to do their part towards developing its usefulness; and although it was not specifically stated at their election that they were expected to contribute a "paper," still it is hoped that each member will, as far as he can assist in promoting the objects we all have in view; and as the ironmasters, together with the proprietors of our extensive steam coal collieries, will either directly or indirectly derive much benefit from institutions of this kind, so I hope they also will use their influence to promote as far as they can the usefulness of this society, by taking a part in our meetings and the discussions. The extensive mineral deposits, together with the enormous manufacturing establishments of this district, present a wide and singularly interesting field for the development of engineering science in all its branches, and now the introduction of railways has become so absolutely necessary in every part of our mineral district for the purpose of transporting the produce of the various mines to their destination, and their construction year after year being naturally better understood, the civil engineer is called upon to carry out works at a cost below that which was originally deemed necessary for such undertakings, where railways are required and constructed for mineral traffic only, it is certainly untrue to expand any of the capital raised on works which cannot add to the stability of the line, structures built only being necessary. If these objects were kept more in view, the cost of our railways would be greatly reduced. In the mountainous and hilly districts many locomotive lines are constructed, with very severe gradients, and if such gradients had been adopted the construction of a large portion of the railways through this district would never have taken place. The difficulties that formerly presented themselves in working over heavy gradients are, to a great extent, reduced by the skill of the mechanical engineer. Engines are now constructed capable of accomplishing duties which ten years ago were unknown, and loads of 150 tons can be conveyed over gradients less than 1 in 40 for a distance of between six and seven miles, at the rate of ten or twelve miles an hour, the weight of the engines, when loaded, being about thirty or thirty-one tons; and although the locomotive cost is considerably augmented by the severity of the gradients, and, however, objectionable they are to the working of heavy traffic, still the power required to overcome them can easily be calculated, and reduced to a financial question; but not so clearly defined are the injurious effects arising from the adoption of severe curves, which not only occasion a fearful amount of extra friction, for which an extra amount of power must be provided, but the fearful wear and tear to the machinery is so great, that it is undoubtedly false economy to adopt them, excepting under peculiar circumstances, or on station sidings, where the engines and trains travel at a very reduced speed. These observations would not apply to small locomotives that are employed about ironworks, as they are constructed especially for that purpose. The mechanical engineers are also called upon to construct machinery with various new appliances, suitable to the altered circumstances that constantly arise, and those who visited the Exhibition of 1862, must have been struck with the magnificent display of machinery, and the wonderful improvement that is constantly taking place in this department. The mining engineer has no less an abundant scope for the exercise of his talents and perseverance—a thorough knowledge of the geology of the district in which he is engaged will first enable him to determine the best sites for winning the minerals and the establishment of the works. The laying out of the works, both above and below ground, requires careful and practical consideration, as much depends upon the future prosperity of the works by the first step being carefully taken. To ensure, as far as possible, safety to the men is true economy; together with the adoption of such machinery as will enable him to work and land his minerals at such a cost as will prove remunerative, assuming Nature has done her part. Of late years the question of ventilation has been thoroughly and practically considered, and experiments have been conducted on extensive scales for the purpose of ventilation in collieries, and the results have been published. All these experiments have resulted in great good, and the amount of air that is now passed through the major part of our collieries in South Wales is far in excess of the quantity which is required to neutralise the regular discharge of gas that exudes from the various working places of the mine, but no amount of ventilation, however well distributed, can successfully dilute such an amount of gas that may be liberated, without a moment's warning, in a high state of tension, from falls. Consequently in collieries with bad roofs, subject to falls, not only safety-lamps can be depended upon for perfect safety. Apart from the necessity of proper ventilation in collieries, to render as far as possible harmless the gas that is generated in mines the health of the men is one of great importance, and there is no doubt that the condition of the miner is now easily improved, now he is enabled to breathe a proper quantity of fresh air, which was denied him before the system of ventilation was so well understood. In Scotland, during the last century, the work of the miner was one, not only of toil, but of great hardship, in which, unfortunately, his wife and family had to take their share. The graphic account given of the coal mines worked in Scotland is so well told by Mr. Bold that I cannot refrain from quoting the following passage. Mr. Bold, who for upwards of half a century was considered a leading authority on all matters relating to the mining of Scotland, gives the following lucid description of the mode in which the coals were worked previous to 1800, and of the employment of female coal bearers:—"The collier leaves his house about 11 o'clock at night (attended by his sons, if he has any sufficiently old), when the rest of mankind are retiring to rest; their first work is to prepare coals by hewing them down from the wall. In about three hours after, his wife (attended by her daughters, if she has any sufficiently grown) set out for the pit, having previously wrapped her infant child in a blanket, and left it to the care of an old woman, who for a small gratuity keeps three or four children at a time, and who in their mothers' absence feeds them with ale or whiskey mixed with a little water; the children a little more advanced in age are left to the care of a neighbour. The mother having then disposed of her children descends the pit with her old daughters, when each having a basket of suitable form lays it down and into it the large coals are rolled, and such is the weight carried that it frequently takes two men to lift the burden upon the backs of the girls, who are loaded according to their strength. The mother sets out first carrying a light candle in her teeth, the girls follow, and in this manner they proceed to the pit's bottom, and with weary steps and slow ascents the stairs till they arrive at the hill or pit top, when the coals are laid out for sale, and in this manner they will go on from eight to ten hours without resting. A woman has been known to carry in the time above mentioned 170 lbs. weight 150 yards up the slope of the coal behind ground, ascend a pit by stairs 117 ft., and travel upon the hill 20 yards to the place where the coals are laid down, and this distance she has performed 24 times a day, making the distance laden, 5016; unladen, 5016; total distance travelled being 10,032, or 5½ miles. It has not been considered an extraordinary circumstance for a Lothian woman to carry from 35 cwt., to 40 cwt., per day a distance of from 300 yards to 400 yards underground, a far greater portion of the road not being more than 4 feet to 6 inches in height, and a consider portion of the ground covered with water." There is another subject to which I beg to call the attention of all those interested in this coal field: It is the large amount of waste that is annually taking place in our collieries, and more particularly in the steam-coal district. Some time since I had the pleasure of reading a paper on this subject. In that paper I stated the results of six experiments, extending over a large area; three were from the Bristol coal field, and three from the Monmouthshire district, where the proportion lost behind and lost in this coal field is the large amount of waste that is annually taking place in our collieries, and more particularly in the steam-coal district. Some time since I had the pleasure of reading a paper on this subject. In that paper I stated the results of six experiments, extending over a large area; three were from the Bristol coal field, and three from the Monmouthshire district, where the proportion lost behind and lost in this coal field is the large amount of waste that is annually taking place in our collieries, and more particularly in the steam-coal district. Some time since I had the pleasure of reading a paper on this subject. 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lowing papers, which will be discussed at the next meeting:—"On Coal Mining in Lancashire," by Mr. R. W. Wynne; "On Multiple Drilling for Riveted Bolts, Girders, &c.," by Mr. Maynard.

The PRESIDENT said the paper promised by Mr. Harris "On the Lignite of Bovey Tracey" had not been sent, in consequence of Mr. Harris's illness. Votes of thanks were passed to Mr. Maynard and Mr. Wynne for the papers.—Mr. MAYSARD, in acknowledging the compliment, said he did not think his paper would create much discussion, but he had endeavoured to write on the subject as correctly and as instructively as lay in his power.—This brought the discussions to a close, and the members afterwards sat down to an excellent banquet at the Castle Hotel. The usual loyal and other toasts followed.

VOLTAIC ELECTRICITY—NEW CALORIC BATTERY.—At the Inventors' Institute, on Thursday (Capt. J. Selwyn, R.N., in the chair), Mr. Callendar described an improved form of door, combining the two principles of the slide and hinge. Mr. James Dickson then read an interesting paper "On certain Inventions for ensuring the economical and efficient production of Voltaic Electricity for Lighting Streets and other purposes." The object of the paper was to explain the means by which electricity could be readily and economically produced. The history of voltaic electricity was carefully traced from the time of Volta, from whom this form of electricity took its name, to the present time, special mention being made of Groves', Smees', the Maynooth, and other batteries which, from time to time, have been looked upon as vast improvements upon then existing apparatus. The theories of Mayer and Joule were referred to, as well as the researches of Prof. Tyndall, whose "Heat as a Mode of Motion," contains so much valuable information upon the subject. He considered that the rapidity of the vibration of the atoms in a conductor was exactly in proportion to its conducting power, and explained that, whilst a battery was producing light and heat less material was being consumed than when the battery poles are directly connected with each other. Mr. Dickson's battery was described as one of the hot-class—the sulphuric acid was heated to 600° Fahr. He claims by his mode of applying heat to be able to use iron and other cheap metals, instead of the dear ones—zinc, copper, &c. The relative mobility of the atoms of an electrolyte determined, he considered, its force rather than its specific gravity. When oil of vitriol was heated to 350° Fahr. only, the electric action is less powerful than when heated to 600° Fahr., probably owing to the waves being less rapid. With the necessary polarising apparatus he was convinced that his battery would be successful for lighthouse purposes. He considered 15 to 20 of his cells equal to 20 to 22 cells; 3 of his cells are not equal to 2 of the nitric acid cells, but the increment in his battery was greater. Groves' battery cost £5. to produce the same amount of electricity as that produced for 10½d. by Dickson's. Comparing the lighting powers, 11½d. with the calorific battery will produce the same amount of light as £5. by Groves'. He declared that the sulphur liberated at the negative poles could be recovered into sulphuric acid to the extent of 19-20ths. The oil of vitriol, during the working of the battery becomes combined with water, but the acid is easily and cheaply reconcentrated. In Smees', Daniel's, and Groves' battery, the sulphate of zinc cannot be recovered, whilst in his calorific battery the recovery was not difficult. The Chairman expressed the fear that the invention promised so much that he was no more likely to perform it than to obtain perpetual motion; indeed, if the invention was not overstated, they would certainly be nearer perpetual motion than they had ever been before. Mr. Varley suggested that as the principal feature in the invention appeared to be the heating of the materials, it was not impossible that it might be as great a step in advance as the introduction of the hot-blast in the manufacture of iron; this, of course, remained to be seen. The new light will be exhibited at the meeting, on February 18, when an opportunity will be afforded for examining the calorific battery in operation.

IMPROVEMENTS IN FURNACES.—As an improvement in constructing cupolas and blast-furnaces, Mr. G. Bedson, of Glamorgan, proposes to construct a wrought-iron water-chamber round the lining and within the exterior masonry, the water in the said chamber being kept cool in the same manner as the water-chambers round tuyeres are usually kept cool.

PREVENTING SMOKE IN FURNACES.—Mr. H. D. Furness, of Riga, Russia, has invented a peculiar combination and arrangement of apparatus for preventing smoke in steam-boiler and other furnaces, whereby a more perfect combustion is obtained, and a considerable economy of fuel effected. According to this invention, as applied to an ordinary locomotive boiler, it is proposed to employ a small steam-pipe, which is carried from any convenient part of the boiler through the fire-box and through one of the ordinary tubes of the boiler, and extends to the front of the smoke-box. At this part it is provided with outlets or nozzles, through which the steam, in a superheated state, is discharged into a corresponding series of tubes, which pass through the smoke-box, and communicate with some of the ordinary boiler-tubes. By this arrangement of apparatus a current or current of heated air and superheated steam are directed into the furnace, so as to mingle with the gases and products of combustion at the moment of the formation. The nozzles or outlets of the steam-pipe are placed some little distance from the mouths of the air-pipes, so that the air will enter freely into such pipes, and be then carried into the furnace by the steam-jets. In adapting the invention to a marine boiler, the steam-pipe is carried from a convenient part of the boiler through the smoke-box, where the steam becomes superheated, and thence passes to a pipe, or pipes, situated under the grate-bars, into and through which the superheated steam is injected, so as to carry with it a current or currents of heated air, which are directed on to the back part of the fire, so as to mingle with the gases at the best point for combustion. In an ordinary boiler or furnace, the steam is brought direct from the boiler by a proper steam-pipe to the mouths of one or more air-tubes, placed under the grate-bars, and passing up through the bridge, or otherwise, into the back of the furnace, the air becoming heated as it passes along the air-tubes before entering the furnace.

BRYNFORD HALL.—A report from this mine, dated January 30, says—

"Both Simond's and Davies's veins have improved, the latter being three times as good as it was when last reported, and now worth fully 2½ tons, with likelihood to improve, as we are daily expecting to cut Slack's vein from this driving. We have passed through a strong pipe of ore going down below the level in Milwyr vein, and the forecast is also yielding nice lumps of ore and spar; the vein is 4 ft. wide, and having the same likelihood for a discovery as before."

DEVON COPPER (Okehampton).—The water being now carried off by the adit, the men have again gone on with sinking. The lode maintains its great size and highly promising character, containing as fine a gossan as ever was seen, quantities of mastic, and stones of ore. The best portion of the lode, however, is not carried in the shaft, but will be cut into to ascertain its value after a few fathoms more sinking. The most sanguine hopes are entertained of early success, and seem to be warranted by the unusually strong appearances at and near the surface.

EAST GREENVILLE.—This mine is gradually improving, and, as the returns will now be increased, the shares are worth the attention of the public. The shaft and ends are worth about 40f. per fathom, and the staves 34f. per fm.; together, 74f. per fathom. The tin is of very high quality, the copper of low produce; but the next sampling of copper is expected to be of better produce.

GARREG.—The hopes lately expressed that matters looked promising for a better state of things at this mine seem not only to continue, but to gain considerable strength, and there is good reason to expect that the praiseworthy perseverance of the adventurers will be very soon rewarded. The regular branch of ore in the mine continues to improve going down, and will probably lead to something good.

THE CAMBRIAN CONSOLIDATED GOLD MINES have considerably improved, and it is stated that returns of gold will shortly be made.

THE COPPER TRADE—AMERICAN SUPPLY.—The "United States Railroad and Mining Register," after quoting a letter from the *Mining Journal* of Jan. 2, says—"We not infrequently observe, in European papers, predictions of a deficit in copper supply, based on the known and acknowledged exhaustion of copper mines noted hitherto for their large product, and on the rapid increase in the consumption of copper metal. From the European stand-point is seen an expanding market and a diminishing product. But the European stand-point only commands a view of the old sources, whence, through cycles of time, have been derived the copper which, with fluctuating prices, has supplied the demands of manufactures and commerce. Here, however, on this side of the Atlantic not only is there no apprehension that 'the consumption of copper must be greater than the production for some years to come,' but, on the contrary, it is here believed to be a part of America's destiny to export copper to the old nations across the sea, along with the great staples which already swell the exports of the United States to more than \$200,000,000."

Native copper is almost as exclusively a staple product of Michigan as is hard-anthracite the exclusive staple export product of Pennsylvania. And from the Lake Superior copper mines of Michigan there were in 1862 sent to market more than three-fifths the number of tons of copper that were yielded by the ore raised from the British mines. In these days of the infancy of the copper trade of Michigan, the native copper product of her Lake Superior Mines is but little less in tons than the culminated and declining product of the copper mines of Great Britain. And after this present year, the copper product of Michigan will surpass the joint yield of the British copper mines, for the Michigan product increases, whereas the British product declines. The rare and brilliant financial success of the Minnesota, the Quincy, the Franklin, the Pewabic, the Cliff, the Central, and the glowing promise of other Michigan copper mines, together with the new mines which, in the ensuing spring months, will have completed their stamp mills, and thereby enlarged the number of copper-shipping mines, are facts which shine as a galaxy, and make the United States ablaze with mining triumphs.

True, the copper mines of Michigan are usually ignored by writers on copper supply in European journals, yet Lake Superior ingots do reach the metal dealers beyond the sea, in the great markets in the British Isles and on the Continent—markets who wants are stimulants to American development in mining enterprise—markets wherein the future demand for copper will inevitably be supplied in large part from Lake Superior sources. Hence the sooner European predictors of deficit in copper supply recognise in Lake Superior the region which is to solace their griefs and silence their misgivings, the sooner will a common interest between the American miner and the foreign consumer be understood. For Europe there is no alternative; she must use Lake Superior copper, for its cheap production, easy transportation, and excellent quality will make it a name and a market wherever copper is in demand. And as no metal grows wider or faster in favour than copper, the mines of Lake Superior will distribute their product in all the channels of commerce with the Old World. When, therefore, Lake Superior is considered as a copper mining region, the mediator must give scope to his thoughts, for the theme is one which covers much ground, blending with which that is real in the present, that which is legibly foreshadowed in the future.

In 1862 the copper mines of Great Britain produced jointly of copper, 14,813 tons. In 1862 from the copper mines of Lake Superior there were shipped, of copper, 9020 tons. In 1862 twelve of the copper mines at Lake Superior produced each over 100 tons of copper, the product of one mine, the Cliff, being 1634 tons. In Great Britain the copper mines have been worked for centuries, whereas less than a score of years have elapsed since the first ton of native copper was shipped from Lake Superior. In Great Britain the copper mines are giving out, are yielding a diminished product; at Lake Superior virgin veins and lodes are every year uncovered and developed, the yield being rich and unfailing, and the prospect being full of profit and promise. However, the copper market may expand, and the consumption of the metal increase, the Lake Superior copper region will be found an adequate source of export and supply."

HOLLOWAY'S OINTMENT AND PILLS—RHEUMATIC AND NERVOUS PAINS.—The cold mornings and evenings will provoke these tortures in constitutions susceptible of these maladies. Nothing affords so much relief as Holloway's Ointment well rubbed upon the skin after repeated warm fomentations. Thousands of testimonials bear witness to the wonderful comfort obtained from this safe and simple treatment, which all can adopt. Holloway's Ointment, assisted by the judicious use of his pills, is especially serviceable in assuaging the sufferings from cramps and other muscular pains, whether they be acute, chronic, external, or internal. It is earnestly recommended that every sufferer from such pains should give Holloway's remedies a few days' trial, which will convince the invalid that ease will reward continued perseverance.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 15th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—

CAKE COPPER.

And that the conditions of said contracts may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 15th day of February, 1864, after which hour no tender will be received.

GERALD C. TALBOT, Director-General.

India Office, February 4, 1864.

TO IRONFOUNDERS.—TENDERS are REQUIRED, by the 19th of February, for about TWO THOUSAND TONS of PIPES and OTHER CASTINGS, COATED, for EXPORT.—Specification may be obtained, and tracings sent, on application to Messrs. Wm. Bird and Co., 2, Laurence Pountney-hill, London, E.C.

BEST MANGANESE SPIEGELEISEN DELIVERED at ANY PORT of the UNITED KINGDOM.—For testimonials, and all information, apply to Wm. Bird and Co., 2, Laurence Pountney-hill, London, E.C.

NICKEL SPEISS AND ORE WANTED. Arsenical preferred. Address, with guaranteed analysis and price, "A. B." care of Mr. Alfred Cockrell, 37, Upper Thames-street, London.

WANTED, a PARTNER with a capital of £1500 to £2000, in a COLLIERY in SOUTH WALES.—Address, "A." Post-office, Aberdare.

CIVIL ENGINEERING.—PUPIL in the OFFICE of a GENTLEMAN of EXTENSIVE GENERAL PRACTICE, and having various and other works abroad. Premium moderate.—Address, "F. G. S." Clifford's New-paper Office, Temple, E.C.

THE IRON TRADE.—A GENTLEMAN, who has had the sole management of ironworks for many years, is now OPEN to an ENGAGEMENT. He is fully conversant with the raising of coal and iron ore, the erecting of works, and the manufacture of iron in all its branches and details, and in the conduct of the correspondence and sales, and can give the most satisfactory references and testimonials of ability and character.—Address, "B. Y." MINING JOURNAL office, 26, Fleet-street, E.C.

IRON AND TIN-PLATE TRADES.—MOST ELIGIBLE SITE, with water-power, and a clear stream for tin-plate purposes. Extensive canal frontage, close to railway station and siding. Coal abundant and cheap. Near New-port, Monmouthshire.—Apply to Mr. THOS. THOMAS, land agent, auctioneer, &c., Neath, Glamorganshire.

TO IRON MANUFACTURERS.—A PARTY in GLASGOW, who has an extensive connection, and who could influence a large trade with Clyde ship-builders, DESIRES a FIRST-CLASS AGENCY for ANGLE and T-IRON, SHIP and BOILER PLATES, and SHEET IRON, or for any of these, &c.—Address, "M. A. C." care of Messrs. Anderson and Watt, 64, Buchanan-street, Glasgow.

TO MINE ADVENTURERS AND OTHERS.—A MINE, which has made important returns of ore, and is of a particularly eligible character, together with the MACHINERY and MATERIALS thereof, TO BE DISPOSED OF on liberal terms. The concern would only require a moderate capital.—Apply to Messrs. PAUL and LINTON, solicitors, Plymouth and Redruth.

TO ENGINEERS, CONTRACTORS, AND OTHERS.—PERSONS DESIRous of PURCHASING THE PATENT RIGHT or ROYALTY for JEWELL'S PATENT FLUE AND TANK BOILER ARE REQUESTED to FORWARD OFFERS to his agent, Mr. W. T. Hawke, Branch Patent Office, 14, Clare-street, Bristol, where plans and copy of specification may be obtained.

TO INVENTORS AND PATENTEES.—A GENTLEMAN having an extensive connection with manufacturers, merchants, and others, would be GLAD to UNDERTAKE THE SALE of INVENTIONS or PATENTED ARTICLES, on commission.—Apply to Mr. RAWLE, patent office, 14, Clare-street, Bristol, N.B.—Continental and foreign agencies solicited.

HORIZONTAL ENGINES FOR SALE, at very low prices:—One 12 in. cylinder, 24 in. stroke; one 12 in. cylinder, 36 in. stroke; and two 14 in. cylinders, 24 in. stroke. All ready for delivery, and may be had with or without fly-wheels.—Apply to Messrs. E. PAGE and Co., Laurence Pountney-place, Laurence Pountney-hill, Cannon-street, E.C.

SPAIN AND PORTUGAL—TO GENTLEMEN INTERESTED IN MINING AND METALLIFEROUS OPERATIONS.—An EXPERIENCED ENGINEER, having an office in MADRID, will be GLAD to RECEIVE INSTRUCTIONS to INSPECT and REPORT ON PROPERTIES.—Address, "Engineer," Clifford's Newspaper Office, Temple, E.C.

MINING SETTS IN CORNWALL.—Mr. T. M. PASCOE, of HELLAND, BODMIN, CORNWALL, has SEVERAL TIN, SILVER-LEAD, and COPPER SETTS in a rich mineral district of Cornwall TO DISPOSE OF. An inspection will prove the value of these properties. Communications addressed as above will be promptly attended to.

SLATE QUARRIES.—G. NORTHCROFT, ENGINEER AND SURVEYOR, FESTINIOG, NORTH WALES, ADVISES ON THE ABOVE CLASS OF MINERAL PROPERTY.

THE BERWYN SLATE RANGE, COUNTY OF MONTGOMERY, NORTH WALES.—TO BE DISPOSED OF, a VALUABLE SLATE QUARRY, or part thereof.—Terms, and all information, can be received from H. M. OWEN, Esq., C.E., Llanystog, Oswestry, until the 15th of March; afterwards to Capel St. Garmon, near Llanrwst, North Wales.

THE PLUM RIVER SLAB AND SLATE COMPANY (LIMITED).—WANTED, a RESIDENT MANAGER for this COMPANY'S WORKS. He must have a thorough knowledge of quarrying and splitting slates, also have a general knowledge of mechanical engineering, and be able to prepare working and progress plans and sections, and keep accounts and manage the works generally. A liberal salary will be given to a competent person.—Apply by letter only, stating age, qualifications, and references, also stating salary required.

By order, E. DOWLING, Sec.

Temporary Offices, 9, Laurence Pountney-hill, Cannon-street, London, E.C., February 2, 1864.

RIVER TAMAR COPPER MINING COMPANY (LIMITED).—Notice is hereby given, that ALL CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED to SEND in the PARTICULARS of THEIR CLAIMS to the Liquidators of the company, No. 10a, King's Arms-yard, Moorgate-street, London, on or before the 20th day of February inst., or they will be excluded from payment.—London, February 4, 1864.

CONSOLIDATED COPPER MINES OF COBRE.—Notice is hereby given, that a DIVIDEND of ONE POUND PER SHARE, free of income-tax, will be PAID to the holders of certificates in this company, at the offices of the association, Gresham House, Old Broad-street, on and after THURSDAY, the 11th day of February next, between the hours of Eleven and Three o'clock.

The proprietors must leave their certificates for examination three clear days before the day of payment.

WALTER SHARP | Directors of the GEO. WHITMORE | Company.

Gresham House, Old Broad-street, January 26, 1864.

The following resolutions were passed, viz.:—

Resolved:—That the report and statement of accounts now read be received, and that the same be printed for distribution amongst the shareholders.

Resolved:—That the marked thanks of this meeting be given to Capt. Bishop for his able management of the mine.

The CHAIRMAN having been moved from the chair, and MARKHAM BROWNE, Esq., called thereto.

Resolved:—That the best thanks of this meeting be given to John Francis Waller, Esq., for his very proper conduct in the chair this day, and for his exertions on behalf of the company.

GEORGE DEDRICKSON, Sec.

46, Dame-street, Dublin, January 30, 1864.

Plates, 8vo., cloth, price 10s. 6d., by post 11s.

THE MINERS' MANUAL OF ARITHMETIC AND SURVEYING. By WILLIAM RICKARD,

Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 36, Upper Parliament-street, Liverpool.

Price: Heard and Son, London: Longman and Co.; the office of the MINING JOURNAL, 26, Fleet-street; of the author, and of all booksellers.

MR. BRENTON SYMONS, M.E., WILL BE IN CORNWALL UNTIL THE END OF FEBRUARY. Orders for inspections or surveys of mineral property must be addressed to Truro.

N.B.—Orders for lithographed copies of maps, &c., must be sent to 18, Hatton-garden, E.C.

MR. GEORGE HENWOOD, MINING ENGINEER, LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SERVICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ireland, &c. Mr. Henwood's extensive experience in his peculiar department of mining science is well known, and will be exerted to the utmost for the benefit of clients.

MINING OFFICES, 28, PRINCESS STREET, MANCHESTER.

LÉIGH, MOLYNEUX, AND CO., MINE AGENTS AND SHAREBROKERS, BUY AND SELL SHARES OF EVERY DESCRIPTION, on commission or for net cash.

Office of the Hazel Grove Silver-Lead Mining Company (Limited), JAMES LEIGH, Secretary.

CHIVERTON WHEAL HOPE SILVER-LEAD MINING COMPANY.

THE WEST CLIFFORD UNITED TIN AND COPPER MINING COMPANY (LIMITED).
Incorporated pursuant to the Joint-Stock Companies Act, 1862, by which the liability of the shareholders is limited to the amount of their shares.
Capital £30,000, in 6000 shares of £5 each.
10s. to be paid on application, and 10s. on allotment.

DIRECTORS.

FREDERICK M. WILLIAMS, Esq., Goovery, Scorrier, Cornwall.
Col. BUSH, 55, York-terrace, Regent's Park (Director of the Goovery Land, Hallway, and Mining Company).
T. E. LANYON, Esq., Kennal Vale, Cornwall.
CHARLES TITIAN HAWKINS, Esq., Oxford.
JAMES WRIGHT, Esq., 19, Cophall-court, Throgmorton-st., London. St. Just
THOMAS COOPER SMITH, Esq., 6, Warford-court, Throgmorton-st., London. United Mines.

FRANCIS PRYOR, Esq., Redruth, Cornwall.
RICHARD MICHELL, Esq., Littlehempston, Looe.
BANKERS—Alliance Bank, Looe.
SOLICITOR—James Bell, Esq., Abchurch-lane.

AUDITORS.

Messrs. Cooper Brothers, Public Accountants, George-street, Mansion House.

BROKERS.

Messrs. Field, Son, and Wood, 9, Warnford-court, Throgmorton-street, London, E.C.
" Kerr, Anderson, and Brodie, 122, St. Vincent-street, Glasgow.
" Leigh, Molynex, and Co., 28, Princess-street, Manchester.
" John Gedhill and Co., Corn Exchange, Leeds.
" Luke Arnold and Co., Small-street, Bristol.
MANAGER—Thomas Cooper Smith, Esq.

OFFICES,—5, WARNFORD COURT, THROGMORTON STREET, CITY.

The object of this company is to work the Ting Tang, West Ting Tang, South Ting Tang, and Wheal Moyre sets.

This extensive property is situated in the south-eastern declivity of Carn Marth Hill, bounded on the east by the celebrated Clifford Amalgamated Mines, the county cross-course being the boundary or division of the two sets, and in the centre of the most productive group of copper mines in Cornwall. The following extracts from a paper by R. Hunt, Esq., F.R.S., on the Mineral Wealth of Cornwall, will show the immense returns made by some few only of the mines in this district, at a period when the mining interests had not the facilities for working mines they now have. It appears from these extracts that nine mines returned, from the year 1815 to 1850, 1,298,722 tons of ore, of the value of £8,015,990. The whole of the lodes, so rich in the mines referred to, traverse the Ting Tang set, or are to be found parallel north or south within three-quarters of a mile.

The granite dipping south-east forms a junction with the clay-slate in the north-west part of the sets, which also contains several cross-courses (the principal of which is the great county cross-course, being the eastern boundary), where the junction of strata occurs, and where the lodes intersect the cross-courses, the great deposits of the Gwennap district have been found, some making in the granite, others in the clay-slate, as the following summary will illustrate:—

	In Granite.	Dividends.	In Clay-slate.	Dividends.
Treasavene	£254,122	Great Consols and Utd. Mines	£1,199,828	(now Clifford Amalgamated)
Beauchamp Buller	120,000		330,000	
Penstruthal	130,000	Unity	340,000	
Jewell	250,000	Maid	46,000	
Damsel	180,000	Police	200,000	
Gorland	150,000	West Clifford United (late)	50,000	
Treskerdy	200,000	Ting Tang	37,000	
Trevelyan	48,000			
Treviley Barrier	37,000			

The above mines have been very profitable for many years. The great mass of the ore produced was mostly made between the 150 and 250 fm. levels, whilst no part of Ting Tang has been sunk below the 140 fm. level.

There are eight lodes already discovered in the Ting Tang set, all of which have been very productive in this and the adjoining mines; of these the middle lode should be particularly noticed. East of John's shaft, in the 140 fm. level, there is a good course of ore, and west of the shaft this lode has a most extraordinary appearance: it is 13 ft. wide, composed of gossan, and letting out large quantities of warm water. This gossan is regarded by the miners of the district as the back of large deposits of copper formed in the granite beneath.

The prospects of the West Clifford United will bear comparison with any progressive mine in the country. It is surrounded by rich mines. It contains many and productive lodes. It is intersected by several cross-courses and elevans. In it a junction of strata occurs. It has yielded large dividends. It is in comparative infancy. All the shafts and levels are in good repair. All necessary buildings are erected on the mine. It can be forked in a short time, and at a limited expense; in fact, it contains all the elements of success. To develop the West Clifford United Mines it is proposed to sink Roach's engine shaft under the 110, from 20 to 40 fm. deeper, to reach the level from which such profitable returns have been made in the neighbouring mines.

Before this depth is attained it is with strong reasons expected the next three lodes south will be together in the shaft; at this point important discoveries are anticipated. It will also be necessary to extend the cross-cuts to intersect the south lodes, which lodes have never been sought after in Ting Tang, although they have given great riches in the mines lying east—viz., the Wheal Clifford, Amalgamated, Nanfill, and others.

The late proprietors left the works in good condition, with the surface buildings in their proper places; this will be a saving of many thousands of pounds, and much valuable time to the company. The railway passes through the mine, by which all ores and materials can be conveyed at the cheapest rates.

The reports annexed are from men of long practical experience and a full knowledge of the district. Their testimony as to the highly promising character of the property, and the great local advantages by which it is surrounded, will be read with interest, and leave nothing to be urged by the directors except an assurance of their strong confidence as to its value.

The company has entered into a most favourable arrangement for the purchase of this property for £10,000, and the vendor has consented to take half in cash and half in shares. These terms embrace a lease for 21 years, on highly favourable terms; the benefit of the works already done, the engine and other machinery upon the mine, the plant, houses, materials, &c., which are estimated at great value.

The capital of the company is fixed at £30,000, in 6000 shares of £5 each, but from estimates made by those who have reported upon the mine, a much less sum will place it in a profitable state.

A considerable proportion of the capital has been subscribed for; the directors will proceed with the works as soon as they deem a sufficient number of shares has been applied for.

Plans and sections of the property, with specimens of ore from the mines, may be seen at the offices of the company, whose prospectuses, additional reports, and every information may be obtained.

Applications for shares to be made to the bankers, brokers, and manager at the office of the company.

REPORTS ON THE WEST CLIFFORD UNITED MINES.

St. Day United Mines, Nov. 18, 1863.—The West Clifford United (late the Ting Tang Consolidated Mines) are situated in the parish of Gwennap, in the county of Cornwall, in one of the richest mining districts of England, and on the junction of the killing with the granite, where all copper mines in this country have proved most productive. The great county cross-course, which is the western boundary of the well-known Clifford Amalgamated Mines, forms the eastern boundary of this set, and all the noted lodes of those mines pass through its entire length. The parallel lodes to the north are those of East and West Damsel, as well as those of the Great Consolidated Mines, which have yielded hundreds of thousands of pounds profit to the adventurers. When Ting Tang was first worked, the main operations were confined to three lodes—viz., the old lode, Roach's lode, and the middle lode; the most productive of these was the middle lode, which was worked as deep as the 140, below the deep adit, and has produced the finest gossans and gossan ore ever found in this country, and the gossan to the west of the engine-shaft is as strong, and presents equally as good an appearance at this level as it did at the deep adit. The old lode is also worked as deep as the 140, and is a strong, fine-looking lode in the bottom level. Roach's, or the north lode, is worked as deep as the 110, and produced yellow and grey ore of a very rich quality. There is not a doubt if this mine is sunk deeper, and the levels extended eastward towards the county cross-course, that they would be again to be very productive. The distance between Roach's lode and the old lode is 40 fms. There are several lodes north and south in this set that have been partially worked at the deep adit level, but nothing has been done below that, so that they might be seen at deeper levels by cross-cutting. I have no doubt that the late adventurers would have done more in this mine had not their eastern boundary been limited; but now they can go as far east as the great county cross-course, and I have no hesitation in saying that I do not know of any piece of ground at present lying dormant that holds out better chance of remunerative success than this. Having been brought up as a tributary from a boy in this mine, I might enter into more details and particulars, but finding that there are other reports of the late working, I deem it unnecessary to do so. I would, however, further remark that a 70 or 80-in. cylinder-engine, with 16-in. pitwork, which would be ample to pump all the water, and a 22-in. steam-whim to draw the stuff, would be all the machinery requisite to work this mine. The late adventurers expended a large amount of money in working the mine; £4000 or £5000 of which will be to the advantage of the incoming shareholders, as they will find the shafts and levels cleared, &c., and all the buildings erected necessary for the working of a mine; and it is my firm conviction that £15,000 judiciously laid out will bring this mine into a profitable state, as returns would be made very soon after the water commenced to be forked.

ELISHA RALPH.

Clarmont, Redruth, Nov. 23, 1863.—In reply to your favour asking for my opinion of the West Clifford United Mines, formerly known as the Ting Tang and Wheal Moyre, I have no hesitation in giving you my opinion that these mines present such chances of success as are rarely to be met with in Cornwall or elsewhere, for the following reasons:—1st. The locality is second to none, being bounded on the east by the rich Clifford Amalgamated Mines, which lodes pass through this set for its entire length, and on the north by Wheal Damsel and West Damsel, the value of which are well known, having been fully tested by the large returns, profits, and dividends that have been realised from them.—2d. Through this set to the east is the large county cross-course, which may be regarded as an important feature, seeing the effect it has produced in all the mines in this locality. I many mention, for your guidance, the boundary, when formerly worked, did not extend so far east as this cross-course, thus preventing them from exploring in this portion of the set.—3d. This mine is situated in the junction of the killing and granite, which has been most productive in this district, and has never been known to fail. Seeing you have so many detailed reports by those who are quite conversant with the underground operations, as well as the position of the property, I presume there is no necessity for my doing so; but I will simply add, it stands sufficiently well in my estimation to induce me to take a good interest in it, and recommend it to my friends.

FRANCIS PRYOR.

REPORT OF THE LATE CAPT. WILLIAM MARTIN, FORMERLY MANAGER OF TRESAVEAN AND TING TANG MINES.

In reply to your request, I beg to say that I do not know of any mine in the county of Cornwall, now left unworked, that I could recommend with such certainty of success as Ting Tang. It is situated in the centre of the mining district of Cornwall, and contiguous to the best mines in Gwennap; the lodes of Ting Tang, and those of Beauchamp Buller, Bassett, South Frances, Clifford Amalgamated, &c., are the same, while those of Damsel, Consols, Jewel, Maid, and St. Day United are parallel lodes north, and those of Penstruthal, Brewer, Trevelyan, Tresavean, and Treviley are parallel lodes south. The deepest part of Ting Tang is only 140 fms., while those of Tresavean, Treviley United Mines, and Consols are from 250 to 310 fms. deep, and the greatest profits realised from those mines have been below the 150 fm. level. The Ting Tang Consols are in excellent condition to commence working anew, being thoroughly cleared, and well secured to the present bottom. The engine-shaft is sunk and enlarged from the surface to the 110 fm. level; the balance-bob and cistern-plates cut, bearers and cisterns left in their places, and also the ladder-roads, cross-outs driven at various levels towards

the intersection of various lodes; and immense quantities of useful work done, which cost many thousand pounds to accomplish, and which is entirely beneficial towards a new working. In addition to the above, there is now on the mine a large and well-built engine-house, of full size, for a 70 or 80-in. cylinder engine, a smith's shop, carpenter's shop, sawyer's house, material and store houses, barns, timber and iron yards, a large counting-house, offices, &c., which will greatly facilitate the operations of a future working, and lessen the expenditure to a large amount. The lodes are eight lodes already discovered in the Ting Tang Mine, all of which have produced ore of rich quality; from five of them immense quantities have been raised, and at the present bottom of the mine the great main lode and the middle lode are conjoined, presenting a splendid course of ore for a great length, and the old lode, which is only a few fathoms south, will also unite with the above-named lodes at a little more depth, where a large mass of ore will most likely be found. It is my firm opinion, and that of all mine agents and experienced miners who have seen the bottom levels of this mine that, if it be properly conducted, it will yield immense quantities of ore. As so much has been done in clearing and securing the mine, sinking shafts, driving levels, &c., also having so many buildings and erections at the surface, which is so much acquisition towards a future working, it would only require a good steam pumping-engine, of a 70-in. cylinder, and a steam whim-engine, of 24-in. cylinder, pump, rods, and all other requisites to drain the water to the bottom, the whole of which, including labour cost and every incidental expense, would not require more than £9000—if you say £10,000, it will leave ample funds for working capital to get good sales of ore on the market. There is not a mine in Cornwall, as I have before said, that I would prefer to Ting Tang, neither is there any mine of such magnitude that can be brought into operation with so little outlay of capital.

REPORT OF CAPT. THOMAS RICHARDS.
Having been called upon to give my opinion regarding Ting Tang Copper Mine, in the parish of Gwennap, I can say, being an agent there under my father, that the mine, in my opinion, had very ineffectual trial during that working; the result was that many large shareholders became tired, and relinquished. The shafts and levels being now comparatively free from "rubbish," would be materially in favour of a new company operating in this extensive set, being situated on the junction of granite and clay-slate, surrounded by the most productive mines Cornwall has produced, and just the same depth as the Consolidated Mines were when resumed by the late deservedly esteemed Captain William Davey, whose mines yielded the enormous profit of 250,000. The two principal lodes have been very productive, and about Roach's engine-shaft the bottom levels looked very well, and some excellent copper ore left off. The lodes north have been tried very materially, and promise to be productive; whilst the south lodes—two being within 20 fms. of each other, and large returns made from the depth wrought—I think very highly of this part of the speculation, and, as a whole, consider, with the present standard, it is likely to be a largely producing and profitable mine.

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Dated February 4, 1864.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, AND OF THE GREAT NORTH TOLGUS MINING COMPANY (LIMITED).—The Registrar of this Court has APPOINTED SATURDAY, the 18th day of February next, at Truro, to SETTLE the LIST OF CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WILLIAM MICHELL, Registrar of the said Court.

Dated this 29th day of January, 1864.

WILLIAM MICHELL, Registrar of the above-named Court.

Truro, Cornwall.

Dated February 4, 1864.

WILLIAM MICHELL, Registrar of the above-named Court.

Truro, Cornwall.

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Dated February 4, 1864.

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Truro, Cornwall.

Dated February 4, 1864.

WILLIAM MICHELL, Registrar of the above-named Court.

FEB. 6, 1864.]

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THE CONTRACT CORPORATION (LIMITED).Incorporated under the Companies Act, 1862.
Capital £4,000,000, in 40,000 shares of £100 each.

DIRECTORS.

WM. LATHAM BAILEY, Esq. (Bailey Brothers and Co.), Liverpool.
W. MONTAGUE BAILLIE, Esq. (Bailey, Baillie, Cave, and Co.), Old Bank, Bristol.
ANTHONY KINGTON BAKER, Esq., Director of the Great Western Railway Company.
GEORGE S. BEECROFT, Esq., M.P., Director of the London and North-Western Railways.
JOSEPH BOYCE, Esq., Director of the Royal Bank of Ireland, and the Midland Great Western Railways Company.
THOMAS DAKIN, Esq., Alderman, President of the Great Western Railway of Canada.
STAURUS DILBERDORFF, Esq. (G. J. Cavafy and Co.), Threadneedle-street.
W. SMITH DIXON, Esq., Goss & Co., Glasgow.
THOMAS GOOCH, Esq. (Gosch and Coons), Director of the Bank of London.
Capt. H. J. W. JEEVES, M.P., Deputy-Chairman Great Eastern Railway Company.
OCTAVIUS OMMANNEY, Esq. (Hallett, Ommannay, and Co.), Westminster.
JOSEPH ROBINSON, Esq., 7, Laurence Pountney-hill.
SOLICITORS—Messrs. Edwards and Co., Westminster.
SOLICITORS IN BIRMINGHAM—Messrs. Daniel and Cox.

Notice is hereby given, that the above CORPORATION is NOW PREPARED to ENTERTAIN APPLICATIONS for CONTRACTS. Communications to be addressed to the secretary.

By order of the Board,

J. CHARLES HANDFIELD, Sec. pro tem.

Temporary Offices, 31, Threadneedle-street, E.C.

THE GLAMORGAN IRON ORE COMPANY (LIMITED).

Capital £10,000, in 8000 shares of £5 each.

Deposit, 10s. on application, and 20s. on allotment.

Thirty days' notice of calls, which will not exceed £1 per share.

Registered under the Companies Acts. Each member's liability limited to the amount of his subscription.

DIRECTORS.

JOSEPH ATWELL, Esq., 12, Campden Hill Villas, Kensington. [Wales].
JAMES BANKS, Esq., 32, Bucklersbury, and Broxbourne.
D. HOUGHTON, Esq., Newhall-street, Birmingham; and Ffowrddwm, Neath, South
WILLIAM HUTCHINSON, Esq., Carrick-on-Shannon.
HENRY PHILIPPS, Esq., 10, Buckingham-gate, St. James's Park.
WILLIAM GIBSON, Esq., 40, Broad-street-buildings.

BANKERS—The Alliance Bank of London and Liverpool (Limited), Lothbury.

SECRETARY (pro tem.)—Mr. Fullwood.

TEMPORARY OFFICES,—41, LOMBARD STREET, LONDON.

This company has been formed for the purpose of purchasing a long lease of and working a very valuable deposit of arableaceous iron ore.

The estate is situated in the parish of Michaelston-super-Afon, in the county of Glamorgan, and consists of more than 1000 acres; and is most conveniently situated within 5½ miles from Briton Ferry Dock, and the important ironworks in this neighbourhood. At a very moderate estimate, it is calculated that this estate contains about 8000 tons of ironstone in each acre of ground, which, after making the usual deductions for faults, pillars, waste, &c., would give about 9,000,000 tons in the whole estate, equivalent to an out-put of 200 tons per day, or 60,000 tons per annum for 152 years.

It is calculated that not more than half the capital will be required.

With regard to profits, it may be safely reckoned at 2s. 6d. per ton net, and this, upon an out-put of 200 tons per day, would yield a dividend of 20 to 25 per cent. upon the amount of capital proposed to be called up; this is without allowing for the profit upon manufactured pigs.

No promotion money will be paid by the company.

All the preliminary expenses, except law charges, up to the date of allotment, are by agreement, not to exceed £500.

Should no allotment be made, all deposits will be returned, free from any deduction.

The Articles of Association of the company contain no unusual clauses, and can be seen at the offices of the company.

Full prospectuses and forms of application for shares can be obtained from the secretary.

MESSRS. C. SCHIELE AND CO., ENGINEERS, INVENTORS, PATENTEES, AND SOLE MANUFACTURERS OF SCHIELE'S PATENT TURBINE WATER WHEELS OF 1863.

SCHIELE'S PATENT SILENT FANS OF 1863.

SCHIELE'S PATENT CENTRIFUGAL PUMPS OF 1863.

SCHIELE'S PATENT BLAST AND VENTILATING ENGINES OF 1863.

SCHIELE'S PATENT TURBINE STEAM ENGINES OF 1863.

SCHIELE'S PATENT MARINE VENTILATORS OF 1863.

SCHIELE'S PATENT EXHAUSTERS OF 1863.

SCHIELE'S PATENT COMPOUND FANS OF 1863.

SCHIELE'S PATENT COMPOUND BLAST ENGINES OF 1863.

SCHIELE'S PATENT GOVERNOR OF 1863.

SCHIELE'S PATENT WAVE POWER MACHINERY OF 1860.

SCHIELE'S PATENT CRUSHING MILLS OF 1860.

WORKS—CHORLTON WORKS, COUPLAND STREET.

OFFICES,—2, CLARENCE BUILDINGS, BOOTH STREET, MANCHESTER.

ALL MACHINERY ERECTED BY US GUARANTEED.

The following is copied from the "Manchester Examiner and Times," Oct. 21, 1863:—
SCHIELE'S WATER TURBINE.—A remarkably ingenious improvement has been effected by Messrs. C. Schiele and Co., of this city, in the invention of the water turbine, or wheel. Wherever a stationary engine is fixed a water turbine may now take its place, effecting an entire saving of coal and engineering, besides taking away all risk from fire or explosions. They are so compact that one, measuring 4 in. by 3 in. deep, will work a large organ, by being fixed in the ordinary way to the water-pipe. The water pressure during the day in Manchester, by the Corporation Waterworks, is equal to 47 lbs. to the square inch, and at night it is 70 lbs. to the square inch; here, then, is a motive-power applicable to many purposes to which it has never yet been applied. The power of the turbines varies from that of a boy to that of 1000 horses and upwards. From the peculiar construction of the turbines, also, it is impossible for them to become choked with leaves or sticks, as is the case with most other turbines. Several small ones are fixed, and are working machines of various sorts in Manchester, and the demand for them is so great that they bid fair to supplant the major portion of the stationary engines now in use, where a cheap supply of water can be had. They are applicable for domestic, commercial, and agricultural purposes, and may be placed in drawing, dining, breakfast rooms, or cellars; they are always ready for work, and may be set going or stopped at any moment by simply turning a tap. They will work printing presses, printing-machines, coffee mills, tobacco-cutting machines, fans, threshing-machines, hoists, and drive hydraulic presses. The size of the little machines, which may be carried in the hand, and the work they do, are in remarkable contrast, and it is only by seeing one at work that its real importance and value can be appreciated. Several of them may thus be seen by applying at the offices of Messrs. SCHIELE AND CO., Clarence-buildings, Booth-street.

For other opinions of the press see "Manchester Guardian," Oct. 13, 1863; "Manchester Courier," Oct. 24, 1863; "Salford Weekly News," Oct. 24, 1863; "Preston Guardian," Oct. 24, 1863.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. | OXIDE OF CCBALT. [WIRE, &c.]

REFINED METALLIC BISMUTH. | GERMAN SILVER—IN INGOTS, SHEET NICKEL AND COBALT ORES PURCHASED.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,

NEAR STOKE-UPON-TRENT, STAFFORDSHIRE.

JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER.

Reference.—Professor Miller, King's College, London.

MR. GEORGE SHEPHERD, CIVIL, MINING, AND CONSULTING ENGINEER.

Letters addressed 26, Throgmorton-street, London, E.C.

CARDIGANSHIRE MINING OFFICES.

MESSRS. WILLIAMS, BRAY, AND CO. beg to inform their mining friends and the public generally that, in consequence of the numerous applications and requests they have received, they now UNDERTAKE THE INSPECTING AND REPORTING ON MINES.

The several members of the firm having had many years' experience in mining in all its branches is the best guarantee of their ability in such matters; and they trust that, by carefully examining the mines they visit, and faithfully reporting thereon, and by constantly watching the progress of both old and new undertakings, they will be able to supply what has been greatly felt in the district, and give every information and advice that may be required.

OFFICES, 44, MARINE TERRACE, ABERYSTWITH.

BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, NO. 2, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON, E.C.

MESSRS. FULLER AND CO. continue to BUY AND SELL EVERY DESCRIPTION OF SHARES IN BANKS, CANALS, MINES, RAILWAYS, AND GOVERNMENT STOCK, either for money or account. Stock Exchange business effected upon the usual commission.

Capitalists who seek safe and profitable investment will find that mines afford a wide range for profit than any other public security, and pay dividends quarterly from 12½ to 20 per cent. per annum. Progressive mines frequently advance hundreds per cent. in value.

Messrs. FULLER and Co. having channels for the disposal of shares comprised in the miscellaneous list, invite the holders thereof to communicate with them; and having upwards of 20 years' experience in the mining market, are prepared to advise as to the purchase of shares for an early advance in price, and for becoming a safe and remunerative investment.

Telegraphic messages promptly attended to, and every information supplied, either personally or by letter. Office hours, from Ten to Four o'clock.

Bankers: The Metropolitan and Provincial, Cornhill.

SOUTH AUSTRALIAN MINE AGENCY.—MR. J. B. AUSTIN, Author of the "Mines of South Australia," has COMMENCED BUSINESS in ADELAIDE as MINE AGENT and SHAREBROKER, and will be happy to furnish detailed reports on any of the mines, and to give the fullest and most reliable information respecting them.—Address, Mr. J. B. AUSTIN, Adelaide, South Australia.

TO CAPITALISTS.—MESSRS. LEICESTER AND CO., INSPECTORS and VALUERS of MINES, &c., MELBOURNE, VICTORIA, OFFER THEIR SERVICES TO SELECT and INVEST CAPITAL IN MINING PROPERTIES, for which they charge 2½ per cent.; and they also COLLECT and TRANSFER the DIVIDENDS, charging 65 per cent. on their amount. Messrs. LEICESTER and CO. earnestly call the attention of capitalists to the many opportunities they possess of investing, to pay from £50 to £150 per cent. per annum. Sums under £50 will be charged extra. All remittances must be made through our agent, Mr. RICHARD MIDDLETON, Mining Journal office, 26, Fleet-street, London; or direct through our bankers, the Union Bank of Australia.

THE MINING JOURNAL.**NICHOLLS, WILLIAMS, AND CO., ENGINEERS,**

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ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, WILLIAMS, and Co. have 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.

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The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

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IMPORTANT TO MINING.

MESSRS. SMYTH AND WASLEY'S PATENT PREPARATOR, for SPALLING and SEPARATING THE ORE FROM THE STONE.

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P. S. EASTON AND G. SPRINGFIELD, Patentees and Sole Manufacturers,

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NEW COMBINED TURBINE, WINDING, AND PUMPING MACHINERY, MANUFACTURED BY GEORGE LOW, MILLGATE IRONWORKS, NEWARK-UPON-TRENT.

THE MINING SHARE LIST

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last paid.
1200 Alderley Edge (cop.), Cheshire [L.]	10 0 0..	—	..	18 6..	1 0 0—Oct.	1863
4000 Bedf ord United (copper), Tavistock	2 6 8..	—	..	2 1/2 2%	13 4 0..	0 2 0—Jan.
1244 Boscastle (tin, copper), St. Just	6 15 0..	—	..	—	5 0 0..	0 5 0—Dec.
2300 Botallack (tin, copper), St. Just	9 1 0..	—	..	—	4 6 15 0..	0 7 0—Aug.
5000 Bronfydd (lead), Cardigan [L.]	2 7 6..	4 1/2..	..	—	9 16 6..	0 2 6—Jan.
916 Corgi (silver-lead), Newlyn	15 5 7..	—	..	—	6 0 0..	1 5 0—Nov.
2300 Clifford Amalgamated (cop.), Gwent	30 0 0..	39	38 1/2 39	30 8 6..	0 10 0—Dec.	1863
12000 Copper Miners of England	25 0 0..	—	..	7/4 per cent.	—Half-yrs.	—
40000 Ditto ditto (stock)	100 0 0..	—	..	1 per cent.	—Half-yrs.	—
867 Cwm Erin (lead) Cardiganshire [L.]	7 10 0..	—	..	23 24	10 18 0..	0 15 0—Jan.
125 Cwmystwyth (lead), Cardiganshire*	60 0 0..	—	..	120	25 10 0..	4 0 0—Nov.
1024 Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0..	—	..	570 580	891 0..	10 0—Sept.
358 Dolcoath (copper,tin), Camborne*	128 17 6..	—	..	740 10 0..	7 0 0—Dec.	
12800 Drake Walls (tin, copper), Calstock	2 1 0..	375	1 1/2 2	0 10 0..	0 1 6—May.	1863
512 East Bassett (cop.), Redruth [S.E.]	25 10 0..	674..	66 68	117 0..	2 0 0—Jan.	
6144 East Cardon (copper), St. Cleer [S.E.]	2 14 6..	27 28	9 2 6..	0 19 0..	1 0—Jan.	
800 East Darren (lead), Cardiganshire*	32 0 0..	—	..	75	93 10 0..	2 0 0—Feb.
128 East Pool (tin, copper), Pool, Illogan	24 8 0..	—	..	350 0..	5 0 0—Dec.	1863
1904 East Wheal Lovell (tin), Wendron	2 13 6..	10 1/2	8 1/2 8%	1 0 0..	0 7 6—Jan.	
2800 Foxdale (lead) Isle of Man [L.]	25 0 0..	—	..	26	62 0..	1 0 0—Sept.
8000 Frank Mill (lead), Christow	3 18 6..	—	..	—	0 17 6..	0 1 6—Nov.
1798 Great Wheal Fortune (tin), Breage	18 6 0..	20	18 20	5 12 2..	0 10 0—Nov.	
5908 Great Wh. Vor (tin, cop.), Helston [S.E.]	40 0 0..	15 1/2	17 17 1/2	2 17 6..	0 5 0—Dec.	
1024 Herdfoot (lead), near Liskeard [S.E.]	10 0 0..	—	..	26 15 0..	1 15 0—Oct.	
400 Lisburne (lead), Cardiganshire, Wales*	18 15 0..	—	..	150	415 10 0..	3 0 0—Dec.
3000 Marke Valley (copper), Caradon	4 10 6..	6 1/2	6 1/2 7	2 12 0..	0 1 6—Jan.	
1800 Miners Mining Co. [L.] (id.) Wrexham	25 0 0..	—	..	128 18 0..	6 5 0—Nov.	
20000 Mining Co. of Ireland (cop., lead, coal)	7 0 0..	—	..	16 7 4..	0 9 9—July.	
5000 Mwndy (iron ore) [L.]	2 10 0..	—	..	0 2 0..	0 2 0—Mar.	
250 Nanty Mines (lead), Montgomery	20 0 0..	—	..	5 0 0..	1 0—Dec.	
8000 New Birth Tor and Vifiter Cons. (tin)	1 6 6..	—	..	2 1/2 3 1/2	0 2 0—Sept.	
8936 North Treckerby (copper), St. Agnes	1 9 0 0..	3 1/2	2 1/2 3 1/2	0 10 6..	0 3 0—Oct.	
8400 Par Consols (cop.), St. Blazey [S.E.]	1 2 6..	—	..	36 19 0..	2 0 6—Mar.	
202 Parys Mines (copper), Anglesey [L.]	50 0 0..	—	..	82 10 0..	10 0—Oct.	
1773 Polberro (tin), St. Agnes	15 0 0..	—	..	7 19 6..	0 10 0—Nov.	
512 Poolebank (tin), St. Agnes	8 0 0..	—	..	1 0 0..	1 0 0—July.	
1123 Providence (tin), Uny Lelant [S.E.]	19 8 7..	48	43 45	71 0..	1 5 0—Nov.	
8000 Ross Hill and Ransom United	2 18 0..	3 1/2	3 1/2	0 10 0..	0 1 6—June.	
612 South Cardon (cop.), St. Cleer [S.E.]	1 5 0..	—	..	436 10 0..	0 1 6—Jan.	
512 South Tolgas (cop.), Redruth, Cornwall	8 0 0..	43	42 1/2 45	74 10 0..	0 1 6—May.	
496 S. Wh. Frances (cop.), Illogan [S.E.]	18 19 8..	—	..	370 13 6..	1 0 0—Nov.	
940 St. Ives Consols (tin), St. Ives	8 0 0..	—	..	488 10 0..	1 0 0—Nov.	
8000 Tincroft (cop.), Pool, Illogan [S.E.]	9 0 0..	20	20 1/2 20 1/2	13 18 6..	0 10 0—Nov.	
4000 West Bassett (copper), Illogan [S.E.]	1 10 0..	—	..	24 13 0..	0 11 0—Sept.	
3000 W. Chiverton (id.), Perranzabuio (S.E.)	—	—	..	55 56	1 18 0..	0 15 0—Jan.
258 West Damsel (copper), Gwennap	38 10 0..	—	..	48 0 0..	1 0 0—Jan.	
400 W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0..	195	190 200	397 0..	4 0 0—Dec.	
512 Wheal Trelynn (copper), Illogan [S.E.]	6 2 6..	75	80 85	597 0..	1 10 0—Feb.	
1000 Wheal Bassett and Grylls (tin)	7 0 0..	17	3 0 0..	0 10 0..	0 10 0—Oct.	
1024 Wheal Grylls (tin), Perranzabuio	2 4 0..	28	28 29	6 2 0..	1 0 0—Sept.	
4295 Wheal Kitty (tin), St. Agnes	5 4 6..	7 1/2	1 8 6..	0 5 0..	0 5 0—Jan.	
1024 Wheal Kitty (tin), Uny Lelant [S.E.]	2 0 6..	13 1/2	9 7 6..	0 7 6..	0 7 6—Jan.	
896 Wh. Margaret (tin), Uny Lel.	9 17 8..	19	17 19	76 5 0..	1 0 0—May.	
1024 Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0..	15	13 15	57 7 6..	0 10 0—Mar.	
80 Wheal Owles (tin), St. Just, Cornwall	70 0 0..	—	..	333 3 0..	5 0 0—Nov.	
396 Wheal Seton (tin, copper), Camborne	68 10 0..	164	165 170..	162 15 0..	3 0 0—Dec.	
1040 Wh. Tremayne (tin), Gwennap	6 17 0..	25 1/2	24 25	48 5 0..	1 12 6—Nov.	
7000 Wicklow (cop.) [L.]	210 0..	—	..	14 5 0..	1 6 0—Aug.	

[* Dividends paid every two months. † Dividends paid every three months.]

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last paid.
2400 Boscean (tin), St. Just	20 10 0..	—	..	36 10 0..	1 0 0—Mar.	1862
3000 Chiverton (lead), Perranzabuio [S.E.]	5 0 0..	12	11 1/2 11 1/2	—	—	—
256 Condurrow (cop.), Camborne	35 0 0..	105	100 110..	85 0..	2 0 0—June.	1867
2450 Cook's Kitchen (copper), Illogan	17 15 0..	22	—	1 7 0..	0 7 0—May.	1862
1024 Copper Hill (copper), Redruth	12 0..	—	..	2 7 6..	—	Sept.
1055 Craddock Moor (copper), St. Cleer	8 0 0..	—	..	7 12 0..	0 4 0—July.	1862
280 Derwent Mines (sl.-lead), Durham	300 0..	—	..	80	147 0..	0 5 0—June.
4076 Devon and Cornwall (cop.), Tavistock	5 18 6..	9	—	0 10 0..	1 0 0—Feb.	1863
3000 Dwyngwyn (lead), Wales	12 6 6..	9	—	0 17 6..	0 2 6—Jan.	
940 Fowey Consols (copper), Tywardreath	4 0 0..	—	..	41 9 3..	0 2 6—June.	1862
5000 Great South Tolgas (S.E.), Redruth	14 16 6..	—	..	7 18 6..	0 5 0—Dec.	1861
1024 Gunnis Lake (Clitters' Adit)	2 0 0..	—	..	0 3 0..	0 2 0—Feb.	1860
5000 Kelly Bray (lead), Callington	4 15 6..	5 1/2	5 1/2	0 6 0..	0 2 0—Feb.	
160 Levant (copper, tin), St. Just	2 10 0..	—	..	1091 0..	0 5 0—May.	1860
640 Mount Pleasant (lead), Mold	2 10 0..	—	..	18 18 1..	0 7 6—Aug.	1862
470 Newdowns Mining Co., Co. Down	50 0 0..	—	..	86 0..	0 1 0—Sept.	1858
5000 Orsedd (lead), Flintshire	0 0 0..	—	..	10 10 0..	0 8 8—Mar.	1862
5000 South Exmouth (lead), Christow	1 5 0..	—	..	0 5 0..	0 5 0—Dec.	1862
280 Speare Moon (tin, copper), St. Just	12 17 9..	—	..	9 15 0..	1 0 0—June.	1862
572 Trelynn Consols (tin), St. Just	12 10 0..	—	..	7 0..	0 10 0—Sept.	1860
1000 Trumpet Consols (tin), near Helston	11 10 0..	—	..	11 0..	0 2 0—9 0—Mar.	1862
12000 Twelve Apostles Adit. (id.), Wrexham	1 0 0..	—	..	—	—	—
4200 Vigras and Clogau (cop.) [L.]	3 5 0..	35	—	4 12 6..	1 0 0—Oct.	1862
1024 Wenton Consols (tin), Wendron	15 18 10..	7	—	8 15 0..	1 0 0—Jan.	1863
4000 West Burton Hill (tin), Yorkshire	60 0 0..	—	..	14 10 0..	3 0 0—June.	1861
1023 West Cardon (cop.), Liskeard [S.E.]	5 6 0..	22	22 23	101 1..	3 0 0—Oct.	1862
4000 West Fowey Consols (tin and copper)	10 0 0..	—	..	9 19 0..	0 3 0—May.	1862
256 Wheat Buller (cop.), Redruth [S.E.]	10 0 0..	40	44 46	929 0..	0 2 0—Mar.	1861
128 Wheat Friendship (copper), Devon	50 0 0..	—	..	2460 10 0..	5 0 0—Feb.	1861